



STUDIES ON WOMEN AND POPULATION

- A CRITIQUE

MALINI KARKAL • DIVYA PANDEY

Himalaya Publishing House

ABOUT THE BOOK

This book is a critical analysis of studies on population from a feministic perspective. It looks at the various demographic aspects of population in its totality. It also takes into account the narrow outlook of the Government of India's population policy which ignores women's health issues in its attempt to curb the population growth.

Improvement in women's health, changes in emphasis on marriage and child-bearing as sole causes for women's existence are the needs which require better understanding by the society. Women's rights to sexuality and fertility, rights to decision-making and their rightful share in development need to become important components of population policy. This quality dimension of the population issues is presently lacking and available studies will document it.

The present book is an attempt to put across available evidence to highlight the need for recognising that empowering women is essential for achieving a holistic approach towards implementation of Family Planning Programme.

Researchers, students of demography, health activists and planners will find this book of particular interest.

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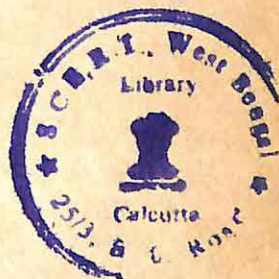
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This book is the outcome of our being invited to work as members of a sub-committee appointed by the former Vice-Chancellor of the SNDT University, Dr. Jyoti Trivedi. The sub-committee was formed to draw up women's programme in population education at a national level under the UGC-UNFPA project. In the first meeting of the sub-committee, we had been requested to undertake a review of the family planning programme in India and its impact on women's lives. During the course of this assignment, we found that health issues of women have been neglected due to the present target-oriented family planning approach of the Government of India. The shift in the Government of India's policy from the family welfare programme to a time-bound family planning programme has severely affected women's health status in India. Women were just the targets of family planning programmes without a proper follow-up by the health staff. This affects their health and creates a negative impact on the minds of acceptors. The programmes were never designed from the women's point of view, though directed to them. Poor health of women has serious implications on the quality of population.

After submitting the review report entitled, "Women's Issues and Family Planning Policy of the Government", we felt that the information contained in the report may be of interest to a wider audience. The material was suitably revised and updated. During the course of our work, we have received encouragement and help from many well-wishers. We would like to express our gratitude to them.

We are grateful to Dr. Jyoti Trivedi, the former Vice-Chancellor of the SNDT University and Smt. Kamalini H. Bhansali, the former Registrar and Director, College Development Council and the present Vice-Chancellor of the SNDT University for inviting us to work as members of the sub-committee appointed under the UGC-UNFPA project. The support of Dr. Neera Desai, the former Director of the Research Centre for Women's Studies, by granting a research assistant for this work was quite encouraging. We highly appreciate her gesture.

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Malini Karkal
Divya Pandey

December 1988
Bombay.

FOREWORD

I must congratulate Dr. Malini Karkal and Dr. Divya Pandey, both experienced scholars in population studies, for bringing out a volume that will be of use to researchers, policy planners and women's groups. Though it is not an original piece of work its value lies in the fact that it brings together available knowledge and information pertaining to the issue—a task that should not be underrated, for such an exercise is periodically necessary, more so at this juncture, when demographic issues, women's issues and development issues are in the forefront. It is now well known that there is a serious gender gap in health. However, the contradictory relationship that exists between women's issues and demographic issues are not sufficiently understood, and women as reproductive beings face many dilemmas. Experience suggests that the success of family planning hinges on the status of women in family and society. To the extent women are saved from unwanted pregnancies and the excessive burden of motherhood, family planning can improve women's status. The crux of the problem is who decides. Granting that an individual has social obligations and that having children is not just a matter of one's own choice, because one is using social resources and therefore, there has to be social control over population, this social control when exercised by the privileged against the under-privileged, one has a right to ask, what is the individual's returns for keeping this social obligation? Population is a development issue. This volume adds a gender dimension by looking at demographic trends, demographic research reports and policies. From some field surveys quoted here, the attitudes of men, women users of family planning services as well as the attitudes and approaches of health functionaries become apparent. These relate directly to women's

rights, rights to their sexuality and fertility, the right to their own bodies. Coerciveness need not always be direct or obvious but the very system of marriage and family and the social-economic status of women render women coerceable in many different ways, by exploiting their vulnerabilities. We definitely need a population policy but how would one bring it about through a people-oriented, gender-egalitarian approach ? The problem has the complex character of being simultaneously a human rights as well as a democratic rights issue. Where the fruits of development go to one section and the costs of development are borne by another, what stand do we take ? A family's immediate needs can only be met by having more children; the economy's long-term growth sustainability can only be met by restricting growth in numbers. A meeting ground between these opposing forces has to be created within the framework of a humane outlook that has human welfare as its heart.

It is hoped that Women Studies' Centres, scholars and institutions will find this a ready reference book, will find in it a basis for launching more enlightened, painstaking research and initiating a more informed approach to questions of policy. This Centre has been trying to put together material on various themes from time to time. This is one more along the same lines.

Malthreyi Krishnaraj
Director
Research Centre for
Women's Studies

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1

INTRODUCTION

India, along with Bangladesh, Bhutan, Pakistan and Nepal, is one of the exceptional countries which has a higher mortality rate for women than for men. As per classification of the UN, from the viewpoint of life expectancy or average life span in the 50's, India is considered to be a high mortality country. Further details on age specific death rates show that for infants in India, the probability of death is thrice as high as for those in the age group 70 and above, when as per the expected pattern, the death rate of infants should not be more than that of those in the age group 50-54 in the same population. High mortality among infants is obviously linked with poor health of women which is reflected in their lower life span. Further, it is observed that though the life expectations for both the sexes have shown improvement, the gap between the life expectancy of women and men is widening over the years, indicating that women have got a lesser share in the improvement in health. Besides the obvious problems of a rapidly increasing population, India faces a very serious problem regarding the quality of life of its population. Health conditions show a rapid deterioration which is inextricably linked with issues concerning women's lives.

Research studies conducted by medical professionals covering populations in different parts of the country provide evidence to show that death among infants is mainly rooted in poor health of their mothers, their poor nutritional level, infected condition and inadequate ante-natal care. The data also point out that for 2.2 infant deaths, there was one

still birth and perinatal mortality rate was 58.3 in rural areas and 35.7 in urban areas, giving a combined figure of 53.8 per 1000 live and still births. They conclude that maternal health and reproductive health outweigh in importance the socio-economic status regarding perinatal survival.

The children need to be born healthy to live through the first few years of life and more so, the first few days, when they are especially vulnerable to environmental conditions. They need mothers who are healthy. If they are born sickly, if their mothers are overburdened and ill, children's chances of survival and prosperity are diminished. Thus, the health of women and children is an important part of the health of the entire population. This is not to say that women need to be given attention only because they are the bearers of children but to point out that the quantity-oriented national population policy is neglecting the quality issues.

The poor health of women is also indicated by the high maternal mortality rates (MMR) of 500 to 800 per 100,000 births in India compared with 15 or 20 in the neighbouring developing countries such as Singapore, Sri Lanka, etc.

Neglect of women's health and high female infant mortality is clearly linked with neglect of women from birth and the lower status accorded to women in our society. The health of women which is at the root of health problems of the population gets neglected throughout the life cycle, starting from sex preferences during infancy, discrimination in feeding practices, food and medical care, biological vulnerability of women during their reproductive ages, and the resultant high level of fertility and its consequences are some of the problems which have received far less attention than they deserve. "Traditionally, poor women in developing countries were either pregnant or breast feeding during most of their reproductive years" (Rao & Gopalan 1969). Their bodies did not have time to replenish stores of vital nutrients. This is still true of a great many women in the Third World and it has grave consequences on their health. Women's position of disadvantage and deprivation in society and their lack of control over their own bodies is responsible for the high maternal deaths and foetal wastage.

While women are brought up to regard motherhood as their responsibility, the decision to have children is nearly always not theirs but is dictated and forced by the husbands and their families. The social structure and the cultural practices of the patriarchal system assure the subjugation of women through recognition of women mainly as homemakers and child-bearers. The differential treatment received by girls

from childhood not only deprives them of the basic needs of life but they are trained to accept them and offer no resistance during their adult lives. Finally, women are burdened with the pressures of their double role of production and reproduction.

Unless social and economic conditions and the chronic ill health that puts women at risk not just during pregnancy but much earlier are changed, many women will continue to die and those who survive will experience many health problems due to lack of health and proper contraceptive services and the unsympathetic manner in which existing services are dispensed. A maternal death must be seen as the culmination of a process which begins from the moment a woman is born.

In India maternal and child health problems that exist today are indeed enormous. Family planning was recognized as an essential component of primary health care at the WHO Conference in Alma Ata in 1979 which made a commitment to "Health for all by the year 2000". Family planning is an essential component of any broad-based development strategy that seeks to improve the quality of life for both individuals and communities. The information about family planning and access to supplies is an important factor in preventing unwanted and high-risk pregnancies. Well-spaced and fewer pregnancies will undoubtedly play an important role in the improvement of women's health. But in reality and in practice, the choice for women is extremely limited. Women are looked upon as only reproductive machines. Opportunities for taking independent fertility decisions are minimum in the Indian family system for women. The social control over women in the family is established through the glorification of motherhood. Women's movement strongly supports family planning opportunities for self-development. With a smaller family size, women will have more leisure, more freedom and more time for gainful employment. Above all, a small family will help women to preserve their health. But how much power do women have in the decision-making for selection of a birth control technique, spacing between two children and limiting of family size?

Our mass family planning programmes of State Governments have often neglected this aspect and women have remained the main targets of population programmes and this has not always been to their benefit as they neither have reproductive rights nor do they have control over their own bodies. Unless the population programme tackles population growth in its totality instead of just taking measures to curb the birth rate, it will not have the desirable impact.

Over the years, the national family planning programme has evolved through several phases. In the beginning, the focus was on a clinical approach with an emphasis on a confidential doctor-patient relationship. The idea was promoted that pregnancies could be planned by individual couples by using suitable contraceptives. However, the growth of population was seen as a cause to organise the programme on a wider scale and an extension education approach was adopted. In 1976, the Government implemented a National Population Policy in an all-out attempt to curb population. Contraceptives and mass sterilisation were strongly promoted. The programme, however, met with limited success. The coercion used by officials led to excesses in the form of atrocities on the poor and the programme suffered a severe setback. Repeated assurance of the Government that the programme was purely voluntary did not carry much weight. Despite the aggressive campaign, the target of reducing the birth rate to 30 per thousand by 1979, was nowhere near its fulfilment.

The long-term goals spelt out by the National Health Policy included reaching a net reproduction rate of unity by the year 2001 A.D. The policy targeted a birth rate of 21, a death rate of 9 and an infant mortality rate below 60 per 1000. Expenditure on family planning has been steadily increasing to achieve these targets. In the Seventh Plan, Rs.3,250 crores has been allocated to the family planning programme against a total of Rs.2,400 crores spent during the previous three decades on family planning. And yet there is no indication that the targets will be achieved. This is so because money is not the sole or even the main factor. For the achievement of the long-term goals, the Government has to make efforts to improve the standard of living and the quality of life of the people.

Family planning programmes should be looked upon as a long-term investment for a better way of life. Individual motivation will automatically come only after a certain level of literacy and economic betterment is assured. The World Bank study pointed out that the wide variations in family planning acceptance between the different States of the country can be accounted for by socio-economic factors. It found a weightage of 60 percent to those factors, only 10 per cent to family planning inputs and another 30 per cent to the interaction between the two. Similarly, the international review made by the U.N. system of global experience in fertility change over the last decade has also clearly shown that the changes have occurred mainly in regions where socio-economic development and changes in the status of women accompanied increased availability of family planning services (*Indian Express* 23-2-1985).

The right social milieu has to be created. This means adopting a multipronged approach to improving the MCH services, educational facilities and employment opportunities for women. One of the main thrusts of family welfare must be to lower the death rate, particularly the infant mortality rate. What is needed to achieve this is delayed marriage, spacing of children, strengthening the general health care and maternal and child health services, including immunisation and improvement of nutritional status of women.

Children in India die either due to poor conditions of parents or poor health facilities. The infant mortality rate is as high as 120 per 1000 births compared to 7 in Japan and Sweden, 10 in France and Canada and 12 in New Zealand, Belgium and the United States. A recent study in Madras revealed that the infant mortality rate was 124 per 1000 in the slum areas compared to 73 per 1000 in the non-slum areas. It was as high as 246 for mothers who were working in the informal sector (*The Hindu* 4-12-87).

The extent of ignorance of child nutrition among mothers belonging to the various strata of society as indicated through feedback collected by doctors of the Nutrition Rehabilitation Centre, run by the Baroda Medical College, is amazing. Many women just have no idea of the quality of food a child needs or the range of food that can be given to it. Besides, a number of misconceptions are prevalent, such as bananas can cause cold, that bengal gram upsets digestion or that jaggery breeds worms.

The consequences of ignorance and misconceptions are that children end up malnourished, and become an easy prey to infections and illness. It is explained that a faulty diet leads to malnutrition and that a nutritious diet is the single most important form of therapy which prevents the relapse of any illness (*The Times of India* 1-7-1988).

Many children die due to infection and undernutrition. Many children can be saved merely through dissemination of information that could make each parent health conscious. The health status of children must be monitored and reporting should be done in a better way. Immunisation coverage for B.C.G., diphtheria, pertussis and tetanus, poliomyelitis and measles vaccines, should form an important part of effective health infrastructure. The UNICEF study on immunisation in India noted that a great surge is undoubtedly underway towards the goal of immunising all infants and pregnant women by 1990. But it requires two complementary actions: People's involvement and improved management of immunisation services to raise immunisation levels in the regions which still lag behind.

Low cost immunisation methods could cut infant mortality in a big way. The main killer of children is still dehydration caused by diarrhoeal diseases. Oral Rehydration Therapy (ORT) which is cheap, effective and simple, uses salt, sugar and water which is within the reach of almost everyone. To bring about a revolution in "Child Survival and Development", participation of mothers in health and nutrition programme can save many children's lives. This can also protect the normal physical and mental growth of many more children. According to UNICEF, children constitute 40 percent of India's population and one in three is born underweight because of maternal malnutrition, one in seven dies before the age of five and an estimated three million die each year of conditions preventable by oral rehydration therapy (ORT) and immunisation. The slow progress of immunisation programme in India reflects the basic inequities of our health care system. It is an established fact that in many Third World countries, a reduction in child mortality rates had led to reduced population growth. In Thailand, between 1960 and 1986, the infant mortality rate (IMR) dropped from 103 to 41 and the fertility rate dropped during the same period from 6.3 to 3.

A direct attack on malnutrition is needed. A food and nutrition education programme in Tamilnadu is targeted for those at the greatest risk. Workers in 9,000 villages weigh children monthly and provide daily feeding for 90 days to those whose growth is faltering. They also teach mothers of underweight children how to improve nutrition at home. High-risk pregnant and breast feeding women also receive food. The benefit of this project is shown on children's health. Serious malnutrition has declined almost by half. Two years after completion of the programme, these children are on an average four pounds heavier than children who did not participate (*The Times of India* 12-9-1988).

Similarly, women in the economically weaker sections need nutritional support to deliver healthy children. The children would be less vulnerable to infection if mothers can breastfeed the infants. A scheme to provide nutritious meal to nursing mothers would directly benefit both mother and child.

Vitamin and mineral supplements help women to have easier births and healthier babies. According to the London-based magazine *Health*, mothers on a better diet which includes sufficient quantities of vitamins D, B12, B6, folic acid, zinc and iron, taken during pregnancy, will benefit from an easier pregnancy without sickness, an easier birth and faster recovery, a larger and healthier baby at birth, a baby more resilient to colds and other childhood ailments and a baby whose mental and physical development reach their potential (*Indian Express* 5-7-1988).

Among the developing countries, India has the highest prevalence of anaemia because of malnutrition. About 60 to 80 percent of the pregnant women in South India suffer from iron deficiency. The prevalence of anaemia among women of the 15-49 childbearing age in the country is widespread. As many as 61 percent have been found to be anaemic. Lives of two million infants can be saved each year if their mothers have extra food during pregnancy, according to a UNICEF report on the state of the world's children. Studies in Bombay have shown that the biggest factor contributing to the low weight of infants is the mother's chronic malnutrition, probably since their own childhood (*Statesman* 16-11-1987).

A series of recent projects clearly suggest that effective actions are possible and can secure beneficial results. The World Bank's experience in dealing with malnutrition suggests that although malnutrition is closely linked to a country's level of economic development, nutrition improvement need not await that development. Even, women's lack of schooling need not pose a big problem to improved nutrition programme if women receive specific messages appropriately delivered. Political commitment is the first prerequisite to solving the problem of malnutrition. Among those who suffer most from unequal distribution of food are women and children.

There is an old saying that women who give birth "put one foot into the grave". For many it is not an exaggeration. In a detailed study carried out recently of over 4700 maternal deaths, the leading direct causes were sepsis (almost half of them due to induced abortions), haemorrhages and eclampsia. Besides, anaemia and jaundice associated with pregnancy were responsible for 20 percent of all maternal deaths. Over one-third of the women died undelivered mainly due to eclampsia and anaemia. About half the deaths occurred during or soon after delivery—often due to haemorrhages and complications of obstructed labour. Quite often they were brought in too late for help. Ninety-six percent of these maternal deaths in the large Indian study were "unbooked".

A sample survey in Maharashtra in 1984 showed 44 percent of the deliveries took place without even a paramedical person in attendance and the government doctors covered only 7 per cent of rural and 40 per cent of urban deliveries. A report from Bikaner district (Rajasthan) is worse, with only 12 percent women receiving pre-natal care and 5 percent skilled attention during delivery. With 76 percent of India's population being rural, it is estimated that about 19 million births occur annually in our villages. But most physicians and nurses are concentrated in the cities. Though the Government has over 8500 PHCs and

85,000 sub-centres, the number of institutional deliveries are less than 15 percent (*The Hindu* 27-3-1988).

According to Dr.Choudury, President of the Federation of Obstetrics and Gynaecological Societies of India (FOGSI), maternal mortality is still very high in the country. A FOGSI study in 23 teaching institutions in the country had revealed that maternal mortality was as high as 7.5 per 1000 cases, compared to the incidence in developed world which was 2 per 100,000. However, in the organised sector in the country, it was lesser at 2 per 1000 cases, as revealed by a study of army and railway hospitals in the country. The study also revealed that maternal mortality was as high as 80 percent in rural areas compared to 20 percent in urban areas. This means that there is no proper care of pregnant women in rural areas through public health centres. Around two million women suffer from the cancer of cervix and 75 percent of them die of the disease. Women contract cancer of cervix due to early marriage, giving birth to children at an early age, many deliveries and improper maternal care during and after pregnancy (*Indian Express* 16-10-1987).

There are no adequate health services for improving women's health and lives based on women's actual needs. The majority of women in this country live a grim life and receive secondary treatment when it comes to health and nutrition, education and opportunities for work. Many mothers die due to severe sepsis after an induced abortion due to unwanted pregnancy. Many die due to severe anaemia. Compared to the thousands who die, many more mothers survive with some disability like chronic pelvic pain, urinary disturbances and genital prolapse. Of these, the most miserable are those who suffer from urinary fistulae. These deaths and chronic health problems can be prevented by planning adequate health care for women with a large number of well-equipped health care centres.

In February 1987, a Safe Motherhood Conference was held in Nairobi, Kenya, under the auspices of WHO, World Bank, UNICEF and UNFPA where Dr.Mahler, the Director-General of WHO, pointed out that maternal mortality is a neglected tragedy involving neglected people — women who are mostly poor and those with least power and influence over how national resources should be spent. A three-pronged strategy of providing pre-natal care, basic health and family planning services at the rural community level would cost merely two dollars per head every year according to the World Bank calculations. This investment could reduce the incidence of maternal deaths by at least half in about a decade. "The growing rate of maternal deaths cannot be ignored any longer because projections on the basis of

available data point to the figure of more than 6 million maternal deaths per year in the year 2000 if developing nations such as India do not initiate remedial measures in the right direction immediately" (*The Daily*, 2-12-1987).

A programme of family welfare should concentrate on women's mobilisation and upliftment through a massive push to female literacy. There is a definite relationship between the education of women and infant mortality rate. A vigorous family life education drive is a must. Maternal and female infant mortality in India has led to an adverse sex ratio over several decades. The female infant mortality rate is 60 per cent higher than for males. By raising the age at marriage alone, we can reduce maternal mortality and morbidity due to adolescent pregnancies. Of the 4.5 million marriages that take place in India every year, three million brides are children. There is an urgent need for an intensified publicity campaign, highlighting the benefits of equal treatment to male and female children throughout their life, right from their birth onwards in all matters such as nutrition, medical care, education, skill-training and opportunities for employment. The first thrust of the Government should be to improve the health of the mother and the child and to increase the survival rate of the child through immunisation and nutrition. If we can protect women and children against the monster of malnutrition, we can safely think of acceptance of family planning. Improvement in the status of women is a crucial factor for the success of family planning in India. The right to control her own fertility can only come through improvement of her socio-economic status in the family and in society. Unless women are given a status on par with men, no country can hope to have anything but a retarded national development process and continuing high birth and mortality rates.

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2

THE DEMOGRAPHIC SCENARIO

The earliest figures of the population count of India refer to the period around 300 B.C. Pran Nath reported the figure after a careful survey of the literature that the population of India at this time was between 100 to 140 million. There seems to have been hardly any growth in the population till 1680. Das Gupta estimates that the population of India around 1600 A.D. that is, at the end of Akbar's reign, was about 135 million. One is, therefore, led to the conclusion that for nearly 2000 years between 300 B.C. and 1600 A.D., the population of the sub-continent was more or less stationary.

Kingsley Davis estimated the population of the subcontinent in 1750 to be 125 million. In 1800, Mahalanobis and Bhattacharya estimated the population to be 207 million. Comparison of the two figures will show that during the 50 years, from 1750 to 1800, the population had a growth rate of 1.01 percent per annum. Table 2.1 below gives the pre-census estimates of population for different periods of time.

The first population census in India was taken in 1872. However, it did not cover the entire sub-continent. Such a census was taken in 1881 and population censuses are now taken every 10 years. Table 2.2 gives some of the data available from these censuses.

Population Trends

Prior to 1921, the population of India grew at a slow rate. This was because India experienced a number of famines and epidemics. The famines of Mysore (1877), Madras (1878), and Bombay (1876-1877, 1896-1897 and 1899-1900) took a heavy toll in terms of human life. The bubonic plague of 1896 resulted in about a million deaths. The decade

of 1901-1911 was more or less normal, but the 1911-1921 decade experienced the great influenza epidemic (1918) which took a toll of twelve million lives. In fact, during this decade the number of deaths exceeded the number of births which resulted in a decline in population (Agarwala 1977:52).

Table 2.1
ESTIMATES OF INDIA'S POPULATION 300 B.C. TO A.D.1800

<i>Year</i>	<i>Population (Million)</i>	<i>Author</i>
300 B.C.	100-140	Pran Nath
A.D. 1600	100	Moreland
	125	Davis
	135	Das Gupta
	110	Datta
	140	Durand
A.D. 1750	125	Davis
A.D. 1800	207	Mahalanobis
		Bhattacharya

Source: V.P. Pethe, "Changes in Size and Growth of Population" in Population of India. Country Monographs, Series No.10, Economic and Social Commission for Asia and the Pacific, United Nations (1982:19).

The growth in population of India has three phases. The first phase covers the period prior to 1921. The year 1921 is known as the year of Great Divide, because during the 30 years between 1891 to 1921 India's population increased by 12.2 million at an average rate of 0.4 million per year and the rate of growth showed rapid increase after 1921.

The second phase covers the period between 1921 to 1951 when the population grew at an annual rate of 1.05 per cent during 1921-1931, 1.34 per cent between 1931-1941, and 1.26 per cent between 1941-1951. Thus, during the 30-year period of 1921 to 1951, 110 million persons were added to the country's population.

The third phase covers the period 1951 and thereafter. The annual rate of growth for the decade 1951-1961 was 1.98 per cent, for 1961-1971 it was 2.24 per cent and for 1971-1981 it was 2.25 per cent. Thus, during the 30-year period 1951-1981, the rate of growth of population averaged to about 2.2 per cent per annum and the addition to the total

population was about 323 million persons. So in reality the year 1951 may be called another Great Divide in India's history of population (Pethe 1982:23).

Despite a decline in birth rate, the rapid increase in population after 1921 was brought about mainly due to the decline in death rate. For instance, during the decade 1881-1891 the figures for the birth and death rates were 49 and 41 respectively. For the decade 1951-1961 the two rates declined to 42 and 23 respectively. Control of epidemics and endemic diseases like malaria (which accounted for about 2 million deaths each year), improvement of drinking water supply, establishment of drainage, medical and health facilities, use of antibiotics and other drugs, and establishment of food distribution system, counteracted the effects of famines, bringing about a decline in mortality.

Demographic Transition

Demographers expect populations to pass through well-defined "stages" or "phases" in its transition. This is known as the theory of demographic transition. The theory distinguishes between three major phases: (a) The pre-transitional phase which is characterized by very high and almost matching birth and death rates, resulting in a stationary population. (b) The transition, during which death rates decline while birth rates remain high or decline very slowly resulting in a very rapid growth of population, often referred to as a "population explosion" or (c) Post-transitional phase when both the birth rate and the death rate are in a state of near balance at low levels and the rate of growth of the population therefore is zero or very low.

In keeping with the pattern of population change in the now developed countries, two hypotheses were developed for the expected changes in the populations of developing countries.

The acceleration hypothesis postulated that the later a country enters the demographic transition, i.e. the period between the traditional pre-industrial high wastage of population replacement (high mortality and high fertility) and the modern "economical" patterns of demographic behaviour (low mortality and low fertility), the faster it passes through the various stages. The hypothesis implies an automatic transfer of the experience of developed countries to today's developing countries without due regard for the uniqueness and peculiarities of the process of demographic change.

The medical technology hypothesis postulated that modern medical technology has broken the link between socio-economic development and levels of living, on the one hand, and mortality levels, on the

Table 2.2
CENSUS POPULATION OF INDIA

Census Year	Persons (2)	Population (in lakhs)		Decennial Change (%) (5)	Excess Males (in lakhs) (6=3-4)	Sex Ratio (F/M) x 1000 (7)	Density of population (8)	% Urban population (9)
		Males (3)	Females (4)					
1901	2384.0	1267.9	1173.6	—	134.3	972	77	10.84
1911	2520.9	1283.8	1237.1	5.75	46.7	964	82	10.29
1921	2513.2	1285.5	1227.7	0.31	57.8	955	81	11.18
1931	2789.8	1429.3	1357.9	11.00	71.4	950	90	11.99
1941	3186.6	1636.8	1546.9	14.22	89.9	945	103	13.86
1951	3610.9	1855.3	1755.6	13.31	99.7	946	117	17.29
1961	4392.3	2262.9	2129.4	21.51	133.5	941	142	17.97
1971	5481.6*	2840.5	2641.1	24.80	199.4	931	177	19.91
1981	6851.8*	3544.0	3307.8	25.00	236.2	933	216	23.31

Source : Government of India, Ministry of Health and Family Welfare, Department of Family Welfare, New Delhi (1988),
Family Welfare Programme in India, Year Book, (1986/87 : 46)

* Includes estimated population of Assam where no census was taken in 1981.

other. The advent of highly sophisticated technology, international assistance and substantial progress in knowledge of disease prevention and cure, has made a significant decline in the deaths possible without any concomitant improvements in the standard of living of the population. Initial successes in disease eradication or control lent credibility and support to this hypothesis. However, it has by now become apparent that it was premature and oversimplified to generalise. A certain "take-off" in development is a pre-requisite for a substantial and maintained reduction in mortality.

Table 2.3

BIRTH RATES, DEATH RATES AND NATURAL GROWTH RATES IN INDIA, 1881-1971 (Rates Per 1000, Population P.A.)

Year (1)	Crude birth rate (2)	Crude death rate (3)	Natural growth rate (4)
1901-1911	49.2	42.6	6.6
1911-1921	48.1	47.2	0.9
1921-1931	46.4	36.3	10.1
1931-1941	45.2	31.2	14.0
1941-1951	39.9	27.4	12.5
1951-1961	41.7	22.8	18.9
1961-1971	41.1	18.9	22.2
1971-1981	37.2	15.0	22.2

Source: Government of India Year Book 1986-87.

According to the transition theory, India was in the first phase during the period before 1921, when the population was expected to be stationary. However, in reality, during the period 1871-1921 the population increased by nearly 20 per cent. Following the year 1921, the death rate in India showed a comparatively substantial decline and a relatively smaller decline in birth rate. In the Western countries, on whose experience the transition theory was developed, the process of decline in mortality started somewhere around the Industrial Revolution and was spread over almost 100 years. It is important to note here that in those countries during this period, the population experienced significant economic as well as social development. In contrast, in countries such as India, the mortality decline was compressed to a period of a decade or two, essentially due to borrowed medical technology and public health programmes which brought about declines in morbidity

and mortality without in any way influencing the social and economic life of the people. In this connection, Pethe (1982:27) rightly points out that, "While scientific truths and technology have universal validity, historical processes involving demographic, economic and cultural change cannot have an all-pervasive validity."

Composition of Population

As seen from col. 5 of Table 2.2 excepting for the decade 1911-1921, the growth rate of the population showed an increasing trend. The figures in Table 2.3 show that inspite of declines in birth as well as death rates, the growth rate showed a rising trend because the death rate declined faster than the birth rate, so the cause of increasing growth rate is not because more children are born to women today than to women in earlier years but because fewer persons are dying today than they did in earlier years. The need for a fertility regulation as advocated by demographers arises due to the fact that though the number of children borne by women has become fewer, the number is still not sufficiently low to show the desired demographic results.

What is of concern in the population figures of India is not only the rising trend in the growth rate, but the information that is indicated in col.6 of Table 2.2, i.e. the males are increasing at a faster rate than the females and this masculinisation is increasing over time. The figures in col.7 of Table 2.2 point this out through the sex ratio of the population. These show that right from the beginning of this century, the ratio of females to males in the population was favourable to males and over time, females became fewer in the population. This consistently declining trend in the sex ratio showed a slight improvement in the census count of 1981. However, this increase in the females in the population was mainly due to increase in the proportion of women aged 50 and above and conditions governing the lives of younger women had not improved at all. There is therefore a need to understand the causes of differentials in growth rates of the two sexes. This is presented below through the discussion on sex ratio of the population.

Sex Ratio of Population

Differentials in the number of persons, which is what the sex ratio indicates, can take place because of four reasons: 1) Differentials in enumeration of the two sexes or undercounting or omission of population of one sex compared to the other, 2) Differentials in the births of males and females or sex ratio at birth, 3) Differentials in migration of population of the two sexes, 4) Differential in mortality or deaths of the two sexes.

Lower sex ratio or fewer females in the population relative to males in the censuses cannot be ascribed to lower enumeration of females at censuses since the data from the Sample Registration Scheme (SRS)* which is a scheme that assures better quality of data on population, also show a lower sex ratio.

Sex ratio at birth is a biological phenomenon and analysis of data from most of the countries in the world has shown that this ratio varies between 104 to 107 males to 100 females, so nature does produce more boys than girls. However, boys are biologically weaker and experience higher mortality compared to girls. Thus as the boys and girls start growing, more boys die than girls and this influences the proportion of sexes in the population in favour of females. At a certain level, the proportion of females takes over that of males and the population has more females than males.

Kingsley Davis (1982:497) shows that the population of the United States of America which is highly feminine, i.e., the sex ratio is high, till the age of 50, there is an excess of males. For 1980 the sex ratio of the population under age 50 was 103.7 males to 100 females whereas for ages 50 and over, it was 84.9, thus making the sex ratio of the population more favourable to females.

The sex ratio of a population is determined by the relative conditions governing the two sexes and not determined by the level of chances of survival for the population. Life expectancy of Indian population being around 50 cannot be taken for explaining the higher masculinity of the population on the grounds that in the United States the population is more masculine upto age 50. Countries in the African continent have the lowest chances of survival as compared to populations of other countries, and yet the sex ratios in Africa are favourable to females. In populations with lower life expectancies, the advantage of a higher sex ratio at birth will disappear at much younger ages than populations with higher life expectancies. This is supported by the above-mentioned presentation of Kingsley Davis which shows that the sex ratio for population under age 50 in the USA was 101.9 in 1910 and as life expectancy improved, it rose to 103.7.

Higher proportion of boys at birth cannot therefore explain the masculinity of the Indian population and the ratio at birth being constant over time cannot be responsible for the declining trend in the sex ratio of the population, as observed in the Census counts.

* Sample Registration Scheme is a dual reporting system based on continuous enumeration by a local enumerator and by the supervisor every six months on a retrospective basis. The chances of omission of events and population by both the systems are removed. There is also no sex selective omission of events.

Census data on migration indicates that at the national level, the contribution of migration to the population is insignificant and therefore, cannot influence the size or composition of population.

Table 2.4 shows that for the population, male growth rate was higher than female growth rate for all the censuses, except for the decades 1941-1951 and 1971-1981. The influx of refugees during 1941-1951 perhaps had more females than males, and may have pushed the female growth rate for the decade. During 1971-1981 there was an increase in the growth rate of females and it is indicated by the improvement in the sex ratio. However, as said earlier, the increase was mainly for ages 55 and above and not for younger ages.

Table 2.4
INTER-CENSUS GROWTH OF POPULATION BY SEX

Period	Excess males over females	Inter-censal growth rate by sex	
		Male	Female
1891 -1901	3,432,629	—	—
1901 -1911	4,677,346	6.3	5.4
1911 -1921	5,771,237	0.1	0.8
1921-1931	7,140,768	11.2	10.6
1931-1941	8,995,035	14.5	13.9
1941-1951	9,968,834	13.3	13.5
1951-1961	13,351,631	22.0	21.3
1961-1971	19,938,900	25.5	24.0
1971-1981	23,611,076	24.8	25.2

Source: Government of India Year Book 1986-87, Op.cit.

Sex Differentials in Mortality

In discussing the subject of sex differentials in mortality, the first question that needs to be answered is: are there differentials in mortality by sex? If there are, what has been the trend over time? Are these differentials biological or socio-environmental?

To answer the first question, one needs to look at the evidence from the census data since we do not have other dependable sources, especially those covering larger populations.

The data on the distribution of population by sex, obtained through censuses, show that the number of females in the population was always lesser than the number of males and over years the differences in the absolute number of the two sexes increased from 3,684 in 1881

to 22,884 in 1981. For the decades 1881 to 1891 and 1971 to 1981, female life expectancy or the chances of survival were higher than those for the males. Larger increase for males compared to that of females, for these years, looks an apparent contradiction. However, it has to be realised that life expectancy is calculated by taking a hypothetical cohort of births and applying chances of survival for each age. In reality, the number of persons surviving at each age will depend on the number of persons in the earlier age to whom the death rates are applicable. So in the calculation of life tables, the age distribution of the population may be 'smooth' but in the population a larger share of ages with higher death rates (such as those in younger ages) will result in differentials in numbers. In keeping with this pattern, the sex ratio of the population has been unfavourable to females and over the years showed a declining trend (years 1901 and 1951 showed a minor deviation).

Table 2.5

DEMOGRAPHIC STATISTICS DERIVED FROM INDIAN CENSUSES—1881-1981

Census Year	Population ('000s)		Differ- ence (2)-(3)	Sex ratio	Estimates of life expecta- tion at birth		Difference (6)-(7)
	Males	Females			Male	Female	
	(1)	(2)			(3)	(4)	
1881	98,646	94,962	3684	963	23.1	27.9	-4.8
1891	118,893	114,429	4464	962	22.9	25.7	-2.8
1901	120,473	117,041	3432	972	22.9	24.1	-1.2
1911	127,925	123,241	4684	963	22.6	23.3	-0.7
1921	128,112	122,319	5793	955	19.4	20.9	-1.5
1931	142,599	135,452	7147	950	26.9	26.6	0.3
1941	163,622	154,632	8990	945	32.1	31.4	0.7
1951	185,456	175,494	9962	946	32.5	31.7	0.8
1961	226,208	212,865	13343	941	41.9	40.6	1.3
1971	283,937	264,013	19924	930	46.4	44.7	1.7
1981	353,347	330,463	22884	935	52.9	54.0	-1.1

Source: The figures in cols.2 and 3 were obtained from census reports of respective years. For values in col.6 and 7 upto 1901, P.Das Gupta, "Estimates of Demographic Measures for India," *Population Studies*, Vol.25, No.3 (November 1971). For years 1911 to 1971, P.Padmanabha, "Trends in Mortality," *Economic and Political Weekly*, Vol.17, No.32, (August 1982). For 1981, K.Srinivasan, "A Reappraisal of the Recent Trends in Growth and Vital Rates of Population in India—Based on the 1981 Census Count," *The Journal of Family Welfare*, Vol. XXVIII, No.2, (December 1981 : 31).

Life Expectancy

A summary measure used by demographers to understand the mortality level of a population is the life expectancy at birth or the average life span. Significantly, Table 2.5 shows that in 1881, females on an average lived 4.8 years longer than the males. However, over the years, including the years when males had a lower life expectancy, the advantage to females showed a declining trend. Since the decade 1921-1931, females had a lower life expectancy. The period prior to 1921 showed a little aberration in the trend and the difference in the two life expectancies which had come down to 0.7 years by 1911 showed an increase (in favour of females) to 1.5 years. A review of the trend in life expectancy, therefore, shows that though females were at an advantage in 1881, over the years the chances of survival of males improved considerably, and by the end of decade 1921-1930, males experienced higher life expectancy compared to the females. The decade 1971-1981 showed, as mentioned earlier, that females were again at an advantage.

Biologically, females have greater chances of survival. Explanation for higher mortality of females (as discussed in detail later) lies in their discriminatory treatment, especially in nutrition and medical attention. In the earlier decades, poor conditions of public health resulted in a much higher prevalence of fatal infectious diseases. The probability of dying due to environmental conditions and lack of proper medical care was far greater than the biological risks. Under these conditions, women, who are biologically stronger, showed greater survival.

It also needs to be added that females have greater participation and power in a subsistence economy. In the earlier decades when subsistence economy dominated, females and children had greater access to food, resulting in the absence, or at least far less discrimination, in nutrition available to the two sexes. With the development of a capitalist economy, males gained a larger share and women faced denial of basic human needs such as nutrition and medical attention, thus showing differentials in mortality in favour of men.

Relatively better data are available in recent years. Gain in life expectancy of females, observed during 1971-1981 can, therefore, be looked into for understanding the changes underlying the improvements in the expectancy of females.

Analysis of gain in life expectancies by the sexes for years 1970-1975 and 1976-1980 by age groups showed that the gain in life expectancy at birth was 1.966 years for males and 3.146 years for

females. The gain in the life expectancy for the female, therefore, was larger. However, further analysis indicated that much of the gain for females was for ages 55 and above. Thus it was observed that at ages below 50, females continued having higher mortality compared to that of the males, whereas it is only at older ages that the females had disproportionally higher gains in their survival.

This observation belies the argument that there is an improvement in the health of young women, especially those in the reproductive ages. SRS data on life expectancies indicated that for the years 1970-1975 as well as for 1976-1980, from age 5 onwards, females have higher life expectancies compared to those of males for the same period. What needs to be realised is that the life expectancy calculated for younger ages is a cumulative effect of the chances of survival at older ages. Hence the larger gains observed for older women were responsible for the misleading conclusion that there was an improvement in the health of younger women (Karkal 1987).

Lower life expectancy for females in India becomes a significant observation as the review of the world situation by the United Nations indicates that "In the vast majority of developing countries, life expectancy is higher for females than for males, in agreement with the well-known sex difference pattern repeatedly observed in developed countries ... On the other hand, exceptions to the widely observed female advantage in mortality characterise mortality patterns in South Asia. Countries where female life expectancy is lower than, or at best almost equal to, male life expectancy include Afghanistan, Bangladesh, India, the Islamic Republic of Iran, Nepal and Pakistan. In Southern Asia, only Sri Lanka has a significantly higher male than female mortality, with 3 years of difference in the expectation of life at birth. However, in the earlier years of this century, upto the 1950's, Sri Lanka had a lower female than male life expectancy, as do many other countries in Southern Asia at present" (United Nations 1985:20). Meegama (1986:5-32) while discussing the mortality transition in Sri Lanka opines that the differences by sex and population group have been of significant importance throughout all phases (of mortality transition). He points out that female mortality rate in Sri Lanka was as high as 120.5 per cent in 1945-1947 and it came down to 117.7 per cent by 1971.

The inference, therefore, is that higher female mortality is a pattern that is deviant from the one that is observed in most of the populations of the developed and developing world. It also needs to be mentioned here that the differentials in mortality by sex cannot be explained by the low overall mortality levels of the population. The United Nations report observes: "Certain patterns of regional variations in the sex differential

in life expectancy by sex seems to be characteristic of countries in East Asia and South Eastern Asia. Sex differences in life expectancy have remained very large in these countries throughout the recent period of rapid mortality decline. In addition, sex differences in life expectancy in the low mortality countries of Western Asia (Cyprus, Israel, Kuwait, and Lebanon) are about 4 years, significantly smaller than those in the low mortality countries of East and South-Eastern Asia (China, Japan, etc.). It seems very difficult, therefore, to attribute the large sex differentials in mortality in the Asian countries to their overall mortality levels" (United Nations, 1985).

The reversal in Southern Asia of the almost universally observed pattern of higher male mortality may be rooted in certain features of the sex roles in the societies and cultures of this region (United Nations 1985). Discussing the differentials in mortality in Sri Lanka, Meegama (1982:355-76) points out that during the course of reduction in overall mortality of the population, the gap between male and female mortality narrowed sharply over the years; however, the mortality of female children continued to remain about 20 per cent higher than that of males over the period 1920 to 1971, indicating the continued presence of discrimination in favour of sons, either in medical treatment, in times of illness or in the intrafamily distribution of food. Among the adults when women are in the reproductive age groups, however, there was a change in favour of females. During the first half of this century, mortality among females aged 30-34 was very much higher than for men in the corresponding age group. By 1971 not only had adult mortality decreased greatly, but also female mortality was lower than that of males. The above findings from Sri Lanka show that even in that country, the change in mortality of females is not so much due to attitudinal changes, but due to advantages of medical technology made available to women in the reproductive ages. Analysis of Indian data, discussed above, support the observations from Sri Lanka, that in the South Asia the discriminatory attitude to women cannot be changed easily. While adult women *may* benefit from advances in technology, the discriminatory treatment meted out to a girl child, is difficult to be changed. Major drastic measures need to be undertaken to bring about the attitudinal change.

The above discussion provides evidence that there are differentials in mortality by sex; and South Asian countries exhibit higher mortality for females in contrast to the generally observed pattern in all the other countries and the roots of this pattern are in the socio-cultural conditions that discriminate females. The case of Sri Lanka, which has an overall

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life expectancy comparable to that of developed countries, further confirms that these socio-cultural discriminations against women are very deep-rooted and will take a longer time to bring about attitudinal changes in the people.

Experience of the developed countries shows that as the mortality declined from its higher level to the lower ones, the groups that benefited the most were the women and the children. Taking average life expectancy at birth as an index of overall mortality, it was observed that women showed higher life expectancy compared to that of males throughout these periods of transition. At present, in some of the developed countries, women have as much as 10 years of higher life expectancy. In contrast to this situation, it will be observed that the lowering of the death rates in India did not benefit women and children. On the other hand, the gap between the life expectancies of the two sexes widened to the disadvantage of women.

A review of the data on age specific death rates (ASDRs) of the now developed countries when they experienced life expectancies comparable to those of India or other countries with higher female mortality, show that the females who now have lower ASDRs for all age groups, did show higher death rates for some age groups. However, the range of these age groups was not as wide as observed at present in India and the other countries with lower female life expectancies. As a result, even at the lower levels of life expectancies, the females in the now developed countries lived longer than males in their population. Overall sex ratio of these populations at all times was also favourable to females.

The United Nations has provided 78 national life tables from 43 developing countries covering a period from the mid-1940s to the early 1980s. "Of the total, 9 countries are from Africa, 19 from Latin America, and 15 from Asia. They have been evaluated to ensure their quality (and provide) a set of tables that are reliable, consistent and comparable" (United Nations 1986:26). Of the total 78 tables only 18 have one or more age specific death rates that were higher for females than males. It is interesting to note that these 18 life tables were from 13 countries and 6 of them had higher life expectancies at birth for females, even when they did experience higher mortality at some ages. The remaining life tables referred to Tunisia (1968 - 1969), Bangladesh (1981) where difference between the expectancies of the two sexes had narrowed during the period 1964-1965 and 1981. India (1971-1976), Iran (1973-1976), Nepal (1974-1976) and Pakistan showed that the difference in expectancies at birth had increased from 1962-1965 to 1968-1971. Sri Lanka showed that from 1943-1947 to 1952-1954 the

difference had narrowed, in 1962-1964 females had higher expectancy and in 1970-1972 the difference had increased in favour of females.

The data presented in the 78 life tables show that there is no relationship between the level of life expectancy and differentials in mortality being unfavourable to females. For three countries, more than one life table is presented. These are Bangladesh (2), Pakistan (2) and Sri Lanka (4). All countries have, over time, shown improvement in life expectancies at birth. For Bangladesh and for Sri Lanka the improvement in mortality has favoured females whereas for Pakistan, with the increase in life expectancy, the gain for males has been larger than for females.

The obvious conclusion is that neither lower overall life expectancy nor improvement over the years by themselves can influence the pattern of differentials in mortality by sex.

Analysing the data from countries in Latin America, South Asia, and Far East Asia, the Population Division of the United Nations concluded that in countries with lower female life expectancy, the pattern is expected to change at male life expectancy of 50 years (United Nations 1982). The analysis also showed that in the countries of Latin America and Far East Asia, the pattern of change was nearly parallel; sex differences widened at an approximately equal pace in the two regions. However, South Asian differentials widened much more rapidly than those in the other two regions, so that at low levels of mortality there was a relatively small difference among the regions in the degree of sex differentials of mortality. For example, with a male life expectancy of 40 years, the range of female life expectancy was between 36.4 years in the South Asian region and 46.4 years in the Far East: a difference of 10 years. However, when male life expectancy was 70 years, the range is between 73.9 years and 77.2 years for the two regions respectively, a difference of only 3.3 years. These differences should indicate basic conditions governing male and female mortality in the South Asian region (United Nations 1982).

In the context of the above observation, it would be interesting to study the changes observed in the Indian population. The data in Table 2.5 indicate that the life expectancy for females in India continues to be even lower than that of the males who have crossed 50 years and that the gap between the expectancies of the two sexes was widening till the decade 1961-1970.

Lopez studied the relationship between male and female life expectancies at birth based on trends in population of 139 developed countries. He concluded that the relationship is highly linear

($e_0 = 0.9890$). He therefore presented this equation for the linear form (Lopez 1983:89). The equation is:

$$a(m) = 0.8788 e_0(f) + 3.541$$

Applying the above equation to the data available from the Indian Sample Registration System (SRS), the following results were obtained:

$$1970-1975 \text{ for } e_0(f) = 49.0, \hat{e}(m) = 46.6, e_0(m) - \hat{e}(m) = -3.9$$

$$1976-1980 \text{ for } e_0(f) = 52.1, \hat{e}(m) = 49.3, e_0(m) - \hat{e}(m) = -3.2$$

It is observed that during 1970-1975, the life expectancy at birth of the Indian males was higher by 3.9 years than the one expected by the observed life expectancy of females of 49 years. Over the years, this gap was reduced to 3.2 years by 1976-1980 when the life expectancy of females increased to 52.1 years. Thus Indian males, relatively, are at a greater advantage in comparison to the males from the now developed countries. However, this advantage has shown some decline in recent times.

Age Differentials in Mortality

Saxena presents age specific death rates by sex for all the census years. He observes that, "till the decade 1931-1941, females had lower ASDRs for all ages, excepting the reproductive ages. Whereas since the decade of 1941-1951, the ASDRs among females have been higher for all the ages from the first year of life till the completion of their reproductive ages" (Saxena 1982) (See Table 2.6).

Generally, the females, even in populations with lower life expectancy, are expected to have lower mortality in the first year of life. The last line, in Table 2.7, in col. 2 to col. 9, shows that in 1975, females in rural areas had higher mortality in the first year of life. However, in 1983 the levels for the two sexes were the same. In urban areas for both the years, female mortality has been marginally lower.

Excessive female mortality for the Indian female is noticed in early childhood (ages 1 to 4) and is observed for all ages following this age group till the ages of childbearing. The data in Table 2.7 indicate that in 1975 till the age 30-34, rural females had higher ASDRs compared to the males. By 1983 the age group remained the same but the level had declined. The same is observed for urban females for 1975 and 1983. For urban females by 1983, there was an improvement in the relative death rates of females for the age group 30-34. This is probably the result of the implementation of the family planning programme which is heavily biased towards sterilisation. Women normally accept it after

Table 2.6
SEX-AGE SPECIFIC MORTALITY RATES, FOR THE DECADES 1901-1911 TO 1961-1971

Age Group	1901-1911		1911-1921		1921-1931		1931-1941		1941-1951		1951-1961		1961-1971	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0	375.18	366.95	385.69	250.09	291.12	268.80	258.15	239.21	220.26	197.30	173.11	154.25	143.17	141.04
1-4	64.10	60.00	80.14	67.19	57.22	51.62	49.03	46.64	36.96	49.28	22.14	26.89	17.74	19.81
5-9	19.48	19.23	18.69	16.14	12.32	11.34	10.18	9.27	15.53	17.60	6.30	7.76	7.12	10.42
10-19	13.53	13.73	21.12	22.68	9.71	11.56	10.05	12.27	11.22	9.41	4.36	4.70	5.18	4.87
20-29	20.04	19.78	26.12	26.99	15.24	21.22	12.55	15.69	11.95	11.25	6.23	7.15	6.00	5.93
30-39	27.55	26.51	31.76	32.48	23.78	29.25	16.24	19.76	16.82	20.73	12.09	18.09	8.72	12.21
40-49	37.19	35.30	39.40	39.80	34.69	38.95	22.00	25.62	27.76	27.37	22.87	25.52	15.04	18.70
50-59	48.84	47.61	50.72	50.26	48.20	48.10	31.83	34.62	42.11	37.74	37.89	36.36	26.62	24.83
60 and over	99.98	98.87	151.03	146.37	99.53	92.49	142.40	138.93	98.70	88.26	84.98	77.05	73.71	72.51

Source : Saxena P. C. *Population of India*, Country Monograph Series No. 10.
Published by United Nations (1982 : 72).

Table 2.7

AGE SPECIFIC DEATH RATES (ASDRs), DIFFERENCE BETWEEN SEXES, INDIAN AGE SPECIFIC DEATH RATES, % DIFFERENCE IN ASDRs, RATIO OF MALE/FEMALE ASDRs.

Age Group (in year)	Age Specific Death Rates								% Difference ASDRs				Ratio Male/Female ASDRs			
	Rural				Urban				Rural		Urban		Rural		Urban	
	1975	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	1975	(10)	(11)	1975	(12)	(13)	(14)
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0-4	57.2	63.5	40.5	43.1	31.0	32.4	21.1	21.7	11.01	6.42	4.52	2.84	0.90	0.94	0.96	0.97
5-9	4.8	5.8	3.4	4.0	2.8	2.7	2.0	1.8	20.83	17.65	-3.57	10.00	0.83	0.86	1.03	1.11
10-14	2.2	2.4	1.7	2.0	1.2	1.5	0.9	1.2	9.09	17.65	25.00	33.33	0.92	0.85	0.80	0.75
15-19	2.3	4.3	2.1	3.0	1.6	1.8	1.4	2.0	86.95	42.85	12.50	42.86	0.53	0.70	0.89	0.70
20-24	2.8	5.1	2.8	4.0	2.1	2.5	1.8	2.4	82.14	42.86	19.05	33.33	0.55	0.70	0.84	0.75
25-29	3.4	4.9	2.9	4.0	2.4	2.4	1.8	2.4	44.12	37.93	0	33.33	0.69	0.73	1.00	0.75
30-34	4.5	5.8	3.8	4.2	2.5	3.7	2.8	2.1	28.89	10.53	48.00	-25.00	0.78	0.90	0.68	1.33
35-39	7.3	6.5	4.8	4.7	5.3	4.7	3.8	3.0	-10.96	-2.08	-11.32	-21.05	1.12	1.02	1.11	1.27
40-44	8.5	7.3	6.2	5.4	7.2	5.0	6.2	3.7	-14.11	-12.90	-30.56	-40.32	1.16	1.15	1.44	1.67
45-49	13.6	9.8	9.4	7.0	11.8	9.1	7.9	5.6	-27.94	-25.53	-22.89	-29.11	1.39	1.34	1.30	1.41
50-54	15.5	16.8	15.1	11.4	13.7	9.3	14.5	8.6	8.39	-24.50	-32.11	-40.69	0.92	1.32	1.47	1.68
55-59	29.2	24.6	21.1	16.8	26.9	19.6	23.2	13.6	-15.75	-20.38	-27.14	-41.38	1.29	1.26	1.37	1.70
60-64	39.7	37.7	36.2	28.8	38.9	36.1	33.8	25.2	-5.03	-20.44	-7.20	-25.44	1.05	1.26	1.08	1.34
65-69	61.0	55.7	54.3	42.9	50.5	45.5	42.0	34.4	-8.69	-20.99	-9.90	-18.09	1.09	1.27	1.10	1.22
70+	126.9	111.5	106.4	94.6	93.9	87.5	91.3	76.1	-12.13	-11.09	-6.82	-16.65	1.14	1.12	1.07	1.20
All Ages	16.9	17.9	13.1	13.1	10.3	10.2	8.3	7.6	5.92	0	-0.97	-8.43	0.94	1.00	1.00	1.09
Infant Mortality	139	145	114	114	84	83	66	65	4.32	0	-1.19	-1.51	0.96	1.00	1.07	1.01

Source : Registrar-General, Sample Registration System, Vital Statistics (1986).

completing the family size. This has an effect on ages till childbearing continues among women. Since the programme in urban areas has been able to cover relatively younger women, one notices improvement of mortality for the women at earlier stages of their life span.

Data in Table 2.7 indicate that in 1983, the level of ASDRs for each age group was lower than that for 1975 in rural as well as in urban populations and for males as well as for females. It is, therefore, noticed that for the period of 1975 to 1983, the ASDRs have shown a decline for each age group.

Table 2.8 gives a comparison between mortality rates for India and the corresponding figures for the South Asian model pattern that has the same level of life expectancy. Table 2.9 gives percentage difference in mortality rates of females compared to those of males by age-groups for India and corresponding South Asian pattern.

Table 2.8 shows that ASDRs for 1970-1975 as well as for 1976-1980 for Indian males are higher than those observed for other populations with the same level of life expectancy for all ages excepting the first year. The difference is larger for women at younger ages and for men at older ages. The overall life expectancy shows that women have lower expectancy than men and this is because larger proportions of the total population are in younger ages. Since chances of dying at these ages are higher for females, the life expectancy or the average life span of females is naturally lesser than for males. Padmanabha (1982:1285-90) pointed out that children in ages 0 to 4 constitute 15 per cent of the population and almost half the total deaths are reported for this age group.

Dyson (1984) says that calculations of life expectancy from age 5 onwards give figures of 56.1 years for males and 58.8 years for females in rural areas and 61.0 years for males and 62.7 years for females in urban areas. It follows therefore that in India, death rates in early childhood are not only much higher than those observed for other populations with a similar level of overall mortality, but also contribute substantially to the overall mortality level.

Table 2.8 also shows that Indian males after the age 5 onwards have higher mortality when compared with males of other South Asian countries. Two areas therefore that need investigation are the causes of high mortality in early childhood for both sexes and those leading to higher mortality among males compared to males of other populations.

Table 2.8
MORTALITY RATES BY SEX, INDIA AND CORRESPONDING SOUTH ASIAN UN MODEL PATTERN

Age	India						South Asian Pattern					
	1970-1975			1976-1980			1970-1975			1976-1980		
	Male (2)	Female (3)	Difference (2-3) = (4)	Male (5)	Female (6)	Difference (5-6) = (7)	Male (8)	Female (9)	Difference (8-9) = (10)	Male (11)	Female (12)	Difference (11-12) = (13)
(1)												
0	.12998	.13505	-.00507	.12100	.12720	-.00620	.13704	.13901	-.00197	.12656	.12584	.00072
1	.07567	.10301	-.02734	.06774	.08992	-.02218	.09063	.10846	-.01783	.07977	.09083	-.01106
5	.02266	.02613	-.00347	.01815	.02266	-.00451	.02047	.02472	-.00425	.01803	.02035	-.00232
10	.01005	.01139	-.00134	.00946	.00976	-.00030	.00871	.01058	-.00187	.00775	.00873	-.00098
15	.01119	.01706	-.00587	.01055	.01460	-.00405	.01030	.01516	-.00486	.00922	.01242	-.00320
20	.01401	.02266	-.00865	.01322	.01972	-.00650	.01215	.01839	-.00624	.01088	.01504	-.00416
25	.01546	.02266	-.00717	.01361	.02129	-.00768	.01480	.01989	-.00509	.01331	.01645	-.00314
30	.02050	.02593	-.00543	.01844	.02060	-.00216	.01834	.02339	-.00505	.01650	.01957	-.00307
35	.02886	.02852	.00034	.02471	.02354	.00117	.02480	.02713	-.00233	.02247	.02316	-.00069
40	.03854	.03260	.00594	.03830	.02871	.00959	.03532	.03295	.00237	.03234	.02879	.00355
45	.05836	.04618	.01218	.05239	.03744	.01495	.05120	.04291	.00829	.04743	.03822	.00921
50	.08418	.06918	.01500	.08165	.05865	.02300	.07714	.06481	.01233	.07238	.05855	.01383
55	.12596	.09773	.02823	.12051	.08975	.03076	.11017	.09893	.01124	.10456	.09048	.01408
60	.18434	.16139	.02295	.18317	.14687	.03630	.16409	.15139	.01270	.15720	.14014	.01706
65	.25081	.22586	.02495	.24215	.20472	.03743	.23169	.21781	.01388	.22337	.20453	.01884
70+	1	1	0	1	1	0	1	1	0	1	1	0

Source : Karkal, Malini, "Differentials in Mortality by Sex", *Economic and Political Weekly*, Vol XXII No. 32 (August 8, 1987:1343).

Table 2.9
PERCENT DIFFERENCE IN MORTALITY RATES OF FEMALES
COMPARED TO THOSE OF MALES BY AGES FOR INDIA AND
CORRESPONDING UN SOUTH ASIAN PATTERN

Age	India		South—Asian Pattern	
	1970-1975	1976-1980	Corresponding to 1970-1975	Corresponding to 1976-1980
(1)	(2)	(3)	(4)	(5)
0	-3.90	-5.12	-1.44	0.57
1	-36.17	-32.74	-19.67	-13.87
5	-15.31	-24.85	-20.76	-12.86
10	-13.33	-3.17	-21.46	-12.65
15	-52.45	-38.39	-47.18	-34.71
20	-61.74	-49.17	-51.36	-38.24
25	-46.29	-56.42	-31.39	-23.59
30	-26.49	-11.71	-27.54	-18.61
35	1.18	4.73	-9.40	-3.07
40	15.41	25.04	6.73	10.98
45	20.87	28.53	16.19	19.41
50	17.82	28.17	15.98	19.11
55	22.41	25.52	10.20	13.47
60	12.45	19.82	7.74	10.85
65	9.95	15.48	5.99	8.43
70+	—	—	—	—

Source: Computed from Table 2.8.

The figures in Table 2.9 show that females in both groups of population are at a disadvantage to the males at younger ages. For India this age group is till 30-34 and for the South Asian model it is till the age group of 35-39. Thereafter, females are at an advantage. It is worth noting that in the South Asian pattern, the difference between the mortality rates of the two sexes has narrowed at ages when women were at a disadvantage, whereas in ages above 35, the male disadvantage has increased probably due to greater gain in mortality by females in higher ages.

In contrast to the above pattern, the females in India not only have larger differences compared to the South Asian pattern for both the time periods, but for the first year of life, for age-groups, 5 to 9 and for 25 to 29 the disadvantages have increased. The disadvantage in ages 40 and above for males for both the time periods is not only larger in India compared to the South Asian pattern, but over time the disadvantage for males has increased. This observation confirms the earlier one that the

health of women in younger ages has not improved but over time the older women have benefited.

In the light of the above discussion, it is worthwhile looking into the change in age differentials in mortality rates of the two sexes over time. Table 2.10 presents the distribution over ages of the gain in life expectancies between 1970-1975 and 1976-1980 in India.

From column 2 in Table 2.10, it is seen that the gain for males was 1.966 years, whereas for females it was 3.146 years. The gain in the life expectancy for females was therefore larger. Columns 4 and 5 show that for males as well as for females, the gain was larger for higher ages than for lower ages and for females the percentage gain was higher for ages 55 and above. Significantly, the largest share of the gain was taken by ages 70 and above. Here again the share was 25.1 per cent of the total for males and 33.67 per cent for females. The figures in Table 2.10, therefore, show that whatever gain in life expectancy that has been made by females in the period intervening between 1970-1975 and 1976-1980, the larger share has gone to older women in contrast to the age-wise distribution of gains for males.

Table 2.10
GAIN IN LIFE EXPECTANCY IN INDIA
BETWEEN 1970-1975 & 1976-1980 BY AGE

Age Group (1)	Absolute		Percentage	
	Male (2)	Female (3)	Male (4)	Female (5)
Total	1.966	3.146	100.00	100.00
0	0.014	0.006	0.73	0.18
1-4	0.034	0.052	1.70	1.65
5-9	0.086	0.098	4.35	3.12
10-14	0.095	0.106	4.84	3.37
15-19	0.095	0.114	4.83	3.63
20-24	0.096	0.120	4.90	3.82
25-29	0.099	0.126	5.04	4.02
30-34	0.106	0.136	5.42	4.32
35-39	0.115	0.150	5.84	4.76
40-44	0.120	0.161	6.11	5.13
45-49	0.125	0.176	6.37	5.60
50-54	0.132	0.198	6.69	6.29
55-59	0.130	0.211	6.61	6.70
60-64	0.120	0.212	6.09	6.75
65-69	0.106	0.220	5.38	6.99
70+	0.493	1.059	25.10	33.67

Source: Karkal, Malini "Differentials in Mortality by Sex", *Economic and Political Weekly*, Vol.XXII No.32, (8 August 1987: 1344).

Table 2.11 presents the differences in life expectancies of males and females by ages for 1970-1975 and for 1976-1980. The difference in life expectancies of the two sexes in the earlier years was 1.544 years whereas in the later years it was 0.365 years. In earlier years, till age 50-54 the percentage difference was much smaller compared to the later period and in the first year of life, it was the females who were at an advantage. For age-group 55-59, in earlier years, males had advantage; however, by 1976-1980 the females were at an advantage. The difference is in favour of older females for ages 60 and above in 1970-1975 and for ages 55 and above in 1976-1980.

Table 2.11

DIFFERENCES IN LIFE EXPECTANCY OF MALES AND FEMALES BY AGE

Age group	Difference in Life Expectancy			
	Absolute		Percentage	
	1970-1975	1976-1980	1970-1975	1976-1980
(1)	(2)	(3)	(4)	(5)
Total	1.544	0.365	100.00	100.00
0	-0.004	0.005	-0.27	1.23
1	0.080	0.061	5.18	16.83
5	0.146	0.134	9.48	36.69
10	0.151	0.140	9.78	38.46
15	0.168	0.149	10.85	40.73
20	0.190	0.166	12.27	45.47
25	0.216	0.189	13.37	51.71
30	0.235	0.206	15.23	56.45
35	0.238	0.203	15.43	55.72
40	0.221	0.180	14.28	49.18
45	0.181	0.130	11.71	35.66
50	0.126	0.060	8.17	16.39
55	0.050	-0.030	3.26	-8.30
60	-0.030	-0.123	-1.95	-33.68
65	-0.078	-0.192	-5.03	-52.61
70+	-0.346	-0.911	-22.37	-249.95

Source: Karkal, Malini, "Differentials in Mortality by Sex", *Economic and Political Weekly*, Vol XXII, No.32, (8 August 1987: 1345)

Table 2.12
LIFE EXPECTANCY AT DIFFERENT AGES BY SEX: INDIA

Age	1970-1975		1976-1980	
	Male	Female	Male	Female
0	50.5	49.0	52.5	52.1
1	57.0	55.6	58.6	58.6
5	57.5	57.7	58.8	60.2
10	53.8	54.2	54.8	56.6
15	49.3	49.8	50.3	52.1
20	44.8	45.6	45.8	47.8
25	40.4	41.6	41.4	43.7
30	36.0	37.5	36.9	39.6
35	31.7	33.4	32.6	35.4
40	27.6	29.3	28.3	31.2
45	23.5	25.2	24.3	27.0
50	19.8	21.3	20.5	23.0
55	16.4	17.7	17.1	19.3
60	13.4	14.3	14.1	15.9
65	10.9	11.6	11.7	13.2
70+	8.6	9.2	9.6	10.9

Source: Karkal, Malini: "Differentials in Mortality by Sex", *Economic and Political Weekly*, Vol.XXII No.32.(8 August 1987: 1345)

Table 2.12 presents the SRS life expectancies at each age which has been used to support the belief that over the years, the health of younger women has improved. These data show that in 1970-1975 as well as in 1976-1980, from age 5, females have higher life expectancies compared to those of the males for the same age group. What needs to be realised is that the life expectancies calculated for younger ages are influenced by the gains in chances of survival at older ages. Hence the larger gains observed for older women and presented in the discussion so far, were responsible for this misleading picture.

A careful look at the disabilities and disadvantages faced by females show that these are rooted in traditional culture or by distortion in the process of development that perpetuated inequalities for women. It must be pointed out here that the fertility level of the Indian population is far lower than those which existed in pre-transition period in European societies. Total fertility rate (TFR) or the number of children a woman will bear in her life time in India was around 6 in 1950 whereas it was 8.1 in Norway and 10.8 in Canada in the nineteenth century. Among the reasons for low fertility of Indian women, besides some cultural factors, is the poor health of women.

Mortality of infants and children (age 1 to 4) is high in India. This again is because of poor health conditions prevailing in general and of women in particular. High infant and child mortality is a major population problem because it affects the mortality level of the population and it is now accepted that higher loss of children discourages acceptance of fertility control and motivation for lesser childbearing. Health situation of women is, therefore, a major issue in the discussion on population.

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3

WOMEN AND HEALTH

It is now well accepted that to understand the health status of women, health and health care system must be seen from beyond the medical framework. Health is very much dependent on social conditions, culture and ideology. The problems of health and health care system reflect the production relations and the broader social order based upon it. The role played by health care system in the prevailing social conditions acts to perpetuate the social control and the values reinforcing the social order. "Health is a state of physical, mental, spiritual and environmental balance made possible by just social, political and economic conditions within a society" (Bhate 1987: 2).

The United Nations Report has grouped India among the high mortality countries. Among the characteristics of high mortality situations are the higher mortality among females, as compared to that of males, especially during early childhood and during childbearing years. Such populations also show high infant and early childhood mortality. More women die in India in one month than die in all of North America, Europe, Japan and Australia in one year (*World Health*, April 1986).

Women are the most ignored section of the population. There is a wide range of disparities between the two sexes. The low status of women in India is largely due to their lack of access to and control over resources within the family resulting in powerlessness of women. The

neglect of women's health is clearly linked with the lower status accorded to women in Indian society.

Socio-Cultural Discriminations Against Women

In India, higher mortality for females is a reflection of the role and status of females within the family and society at large. Women's socio-economic status in the family greatly affect their own health and the health of their children. When females are discriminated against, it affects female children more. Low status leads to discriminatory feeding and health care for young girls and sometimes to overt female infanticide. It also affects women's access to health information and other family resources such as food, education and medical care. Boy babies are valued more highly than girl babies for the continuation of the family line. Girls are considered 'Paraya Dhan' as they will move away to someone else's family. Boys are supposed to provide support to their parents in their old age which after marriage, girls cannot provide. As society attaches higher values to sons than daughters, the sons are given better nutrition, better health care, and a better chance to survive.

It should also be noted that the neglect of women plays a role in the high childhood female mortality. The diseases for which the incidence seems particularly high among female children are those which may reflect neglect or poor nutrition and the fact that wanted children in general and wanted daughters in particular, have a higher probability of surviving, confirms the notion that there is an element of choice or at least unconscious neglect involved in these deaths. That most of the children who are taken to medical centres are male, helps to confirm this pattern (Simmons et al 1979).

Gnanadasan (1986:1630) says that the Indian woman is doubly oppressed, reduced into a machine for producing and reproducing labour power. Her humanity and personality are denied and suppressed. Patriarchy is reinforced in the modern industrial system, making women's subjugation acute and generalised. Ill-health of women hinges on a wider concept arising from existing political, economic and social norms in which women are second-class citizens.

Discrimination against women starts very early in life. The desire for male child has now been expressed in the spread of centres for amniocentesis that is followed by female foeticide. On the one side is the public debate expressing opposition to such programmes, on the other is the growing evidence that the centres providing such services are rapidly increasing (Shukla et al 1987 & A. Ramanamma & Bam-

baivale 1980). Female infanticide is also reported from various parts of the country.

The issue of misuse of sex-determination tests found expression in the resolutions adopted by over 800 delegates from 100 countries who attended the Fifth International Women and Health Conference at Costa Rica in May 1987. The relevant portion said:

"Our reproductive capacity has been manipulated and made the object of scientific experimentation. However, research is never neutral. For Third World women this type of research constitutes one aspect of institutionalised genocide. This is most clearly demonstrated by the experience of Indian women" (Bhate 1987: 1).

Dr. Drego, Director of the Transectional Analytic Centre for Education, Research and Training (TACET), Delhi, observes: "The parents' feeling of welcoming, from conception to the time of its birth, is essential to the development of the child. Even the physical development depends on this. It is a 'permission to exist' given in an unspoken way at conception and given physically when the child is born. Baby girls often get the 'don't exist' injunction because parents are sometimes not even willing to look at the child for two days. This is a kind of grave violence, consequences of which we see later on. The lack of acceptance, especially of baby girls, leaves a 'hole' in the child's personality that affects its development" (*The Times of India* 1-2-1988).

Discrimination against females from their early childhood is manifest in their conscious and sub-conscious neglect in nurture, poor nutrition, denial of "prestigious" foods and absence of provision of health care. Evidences are now available from different parts of the country that the female child is breastfed for a shorter period and mostly at the convenience of the mother, whereas the male child gets fed for a longer duration and "on demand". This feeding of the male babies "on demand" and of girls at "the mothers finding time" from their duties, not only results in discrimination in the nutritional needs of the two sexes but lays the foundation of "gastropolitical socialisation of children into roles of demand (boys) and deference (girls)" (Appadurai 1981: 498).

It also needs to be noted here that young mothers who are at the lower rung of the family hierarchy and are burdened with more work, deprive their daughters of their nutritional needs to a larger extent. Also, birth of a male heir may shower on the young mother a position of privilege and she may be excused and even encouraged in case she takes time to nurse her son. Reaction to the birth of a female baby may

be the opposite. It has been observed in a study from Maharashtra that the special foods which may be prescribed for a mother during her post-natal period are available for a longer duration in the case of sons than in the case of daughters (Khare 1976:162).

Based on data collected by Levinson (1972) from Morinda in Punjab, from a village in Tamilnadu by McNeill (1986) and from more than 16,000 households in Karnataka by Bhattacharjee, (1986:230) it was observed that male babies were breastfed for longer periods than females. In Tamil Nadu the difference was 5 months and the difference between the most propertied and the assetless classes was a further 5 months, so that a male child in a landed household was likely to be breastfed for 10 months longer than a female child in an agricultural labouring household.

Another cultural factor that affected the duration of breast-feeding was the desire for male children rather than female. A detailed field study in a village of western Uttar Pradesh found indication of indirect discrimination against baby girls in breast feeding. When the first child was a daughter, the mother tried to become pregnant immediately for a son. Soon after the woman conceived, she stopped breast feeding the baby girls. In contrast, when the first child was a son, an attempt was made to postpone the next pregnancy through abstinence. In the distribution of more nutritious food like milk, butter and eggs, sons were shown preference.

D'Souza and Chen (1980:257-70) report 21 per cent higher female post-neo-natal mortality compared to the male, in Bangladesh. In their later work, the authors report that the discrimination in parental care, breastfeeding and feeding patterns, and the treatment during illness, is not due to financial constraints and results in excess female mortality in ages 1 to 4 even among the wealthy land-owning families (Chen et al 1981:55-76). It is important to note that the studies in South Asian countries show that the influence of these cultural conditioning is so strong that neither maternal education nor parental concern about intergenerational wealth transfers nor other social variables in the model had any significant impact on infant survival (Ware 1984:207).

That nutrition has an important contribution to susceptibility to infection and general health is now well established. It has been pointed out that aetiology of malnutrition functions in terms of factors operating on the household and malnutrition does not often affect every household member equally at any given time (Sen 1985). Both in absolute terms and in relation to recommended daily allowances, women and girls consume less than men and boys. Wheeler (1984) reviewing the

situation in South Asian households, points out that in these areas men take a disproportionate share of household food resources at the expense of other members and that women and children get less, both than adult men and than what they need physiologically. The consequences of getting less are more severe for women than for men so that this system of intra-family allocation is the proximate cause of malnutrition. An important observation of Wheeler is the fact that women permit this distribution and therefore, acquiesce in the reproduction of malnutrition.

Impact of malnourishment on growth and development is documented and it is reported that "the relative neglect of the female child is evident from the fact of greater prevalence of growth retardation even in infancy, among girls, than in boys. It is such a nutritional insult commencing right from infancy and continued through all stages of development, that eventually, results in maternal health/nutritional status which harms not just the women but the succeeding generation as well" (Gopalan 1985:162).

It has also been proved that even 'mild' and 'moderate' degrees of malnutrition could impair muscular efficiency and intellectual development of children. The study by the Nutrition Foundation of India conducted by the nutrition section of the Department of Paediatrics of Banaras Hindu University covered 1336 children aged between six and eight years. The most important conclusion that emerges from this study is that growth retardation observed in the children of poor rural communities is associated with evidence of impairment of both physical stamina and mental abilities.

Scholastic performance was influenced by a host of factors—nutritional status, socio-economic status, total family environment, family size and psycho-social opportunities. Nutritional status, however, appeared to be the most important determinant. It was concluded that undernutrition and the consequent functional impairment would not be corrected by school meal programmes of the type generally pursued. School meal programmes could, however, be justified on the basis that they promoted better school enrolment and reduce drop-out rates and also provide, to some extent, indirect financial support to poor families (*The Times of India*, 12-1-1988).

The nutritional status of children in Punjab was studied by CARE in 1974 and the results, as given in Table 3.1, are truly revealing. Throughout the pre-school years, malnutrition was higher in the females.

Table 3.1
NUTRITIONAL STATUS OF CHILDREN ATTENDING SAFDARJUNG HOSPITAL,
NEW DELHI: DEGREE OF MALNUTRITION

<i>Age group</i>	<i>No.</i>		<i>Normal</i>	<i>1st</i>	<i>2nd</i>	<i>3rd</i>
0 - 1 years	3910	M	38.10	34.21	20.12	9.1
	3627	F	39.01	35.31	19.29	9.5
1 - 2 years	804	M	26.12	37.81	23.38	12.69
	644	F	23.29	30.12	20.19	26.40
2 - 3 years	629	M	30.05	31.81	25.76	12.62
	439	F	20.50	32.80	25.05	21.64
3 - 4 years	317	M	31.55	36.91	18.93	12.62
	220	F	29.09	32.73	23.64	14.55
4 - 5 years	334	M	34.43	38.92	16.17	10.48
	194	F	32.28	51.02	15.46	15.46
				<i>Male %</i>	<i>Female %</i>	
Severe Malnutrition	Infants			2.35	18.35	
	Toddlers			7.98	14.71	
	Pre-schoolers			4.26	6.71	
Moderate Malnutrition	Infants			15.33	30.38	
	Toddlers			21.00	25.29	
	Pre-schoolers			21.57	38.16	
Mild Malnutrition	Infants			25.64	30.47	
	Toddlers			34.42	35.67	
	Pre-schoolers			39.48	37.20	
Normal	Infants			56.67	20.81	
	Toddlers			36.62	14.33	
	Pre-schoolers			34.68	27.93	

Combining all the age groups, the percentage of different nutritional levels out of 100 per cent was as follows:

	<i>Male %</i>	<i>Female %</i>
Severe malnutrition	28.57	71.43
Moderate malnutrition	43.07	56.93
Mild malnutrition	56.40	43.60
Normal	69.20	30.80

Source: Seminar, Delhi, (March 1987, No.331: 34).

The studies of nutritional conditions of children below 5 years of age in the two villages of Sahajapur and Kuchli provide firm evidence of (1) remarkably high incidence of undernourishment, even of the 'severe' and 'disastrous' types and (2) systematic sex bias reflected in higher deprivation of girls vis-a-vis boys. Interestingly enough, the village with a better overall nutritional record has a much sharper sex discrimination. The economic benefits accruing to the children of Kuchli through land reform, etc. seem to have primarily benefited boys vis-a-vis girls (Sen & Sengupta 1983: 855).

Chaudhuri (1984:50-53) examined the extent of sex bias in child nutrition for a sample of agricultural labour households in a village of West Bengal and found that the extent of malnourishment was greater among the girls as compared to the boys in the age group 1-5 years.

Another study found 20.3 percent of girls severely malnourished compared to 9.1 percent boys (Chand & Soni 1983).

Similar results of nutritional deprivation and growth retardation being higher for female babies compared to that for males, are reported for some of the cities in India (See Table 3.2).

The reasons for the differential treatment of family members and especially between the two sexes, are largely governed by cultural principles. That male members have a larger say in decision for food allocation is indicated by the observation from the data from Maharashtra collected by the International Labour Organisation (ILO). This study showed that the nutritional status of children was better when women, rather than men, directly controlled grain and/or cash with which to purchase grains (ILO 1979).

Caldwell et al (1982) also supports the view that a marked degree of female autonomy is probably central to exceptional mortality decline, especially in poor but open societies. He further adds that when women's position is relatively good, so usually is that of children, since mothers are generally close to children than are fathers and identify more closely with them. Inequality in the family is usually a contrast between patriarchal adult males and everyone else.

In discussing the differentials in female mortality, especially in the South and the North, Dyson and Moore (1983) state that mortality and female autonomy (especially of young married women) are related. Women with more autonomy can more successfully deal with their children and their own health needs. If women can make decisions about medical treatment for their children (especially girls) or family planning for themselves and if they control enough resources to buy

Table 3.2
TABLE OF MALNUTRITION ON THE GOMEZ'S SCALE IN MALE AND FEMALE INFANTS

Centre	Male							Female						
	Retardation Grade							Retardation Grade						
	Excellent	Normal	I	II	III	NR	N	Excellent	Normal	I	II	III	NR	N
Bombay	12.5	21.9	42.5	18.3	2.8	2.0	958	8.2	17.4	43.2	25.4	4.5	1.3	862
Calcutta	5.4	14.2	42.7	25.0	8.2	4.5	667	5.5	14.8	36.9	27.5	10.6	4.7	710
Madras	10.2	19.9	41.7	23.0	3.1	1.2	846	5.6	14.8	43.8	28.3	5.7	1.8	883

Notes : N = Total Numbers of Sample, NR = No response.

Source : Gopalan, C. " The Mother and Child in India," *Economic and Political Weekly*, Vol XX No. 4, (26 January 1985 : 162).

medicines, have free mobility and time to consult medical practitioners, the effects on their own and children's health can only be beneficial. Autonomy to women may ensure better nutrition for their daughters. Autonomy to women is essentially measured in terms of access to resources, employment, mobility and time, age at marriage and education.

However, it has been observed that women do not dominate quantitative decisions and there is no significant association between female wage work participation and their control over food expenditure and purchase decisions. It has been pointed out that "Income does not guarantee improved female status within the household or society" (Jain 1980:4).

It is customary that a meal is consumed by different household members at different places and at different times. In general, eating order obeys certain principles, with age and male sex taking precedence, and with husband's relatives and patrikin taking precedence over wife's relatives and matrikin. Women serve food and assign quantities despite male silence or refusal. Women eat last. Age and sex play a role in the degree of intelligence displayed over transgression of food rules. Women in turn obey an eating order based on age and husband's rank within the household. Food items are identified as having status or prestige. If supplies of them are scarce, such items are either never eaten by women or reserved for men (Appadurai 1985 and Thiagaraja D. 1973). Special foods for women are often called "left-overs" and husband's "left-overs" are appropriate for the wife alone.

"In India, the family never sits down to a meal at the same time. The woman is expected to cook and serve the men of the family first, then comes the turn of the boys. The women and the girls are the last to eat, by which time, both qualitatively and quantitatively, the food tends to run out. The more nutritious and protective items on the day's menu tend to be cooked in a smaller quantity. The dal, the vegetable and the occasional dish of meat, fish or eggs, tend to be finished by the time it is the turn of the girls and the women to eat. They therefore have to make do with rice, salt and green chillies or dry rotis along with some pickles" (Mojumdar 1987:33).

A survey in India by the National Committee on the Status of Women found that women in 48.5 per cent of the households ate after men. Occasions for "feasting", either at household or at community level, also differentiate in allotment of food between the two sexes. The custom of separation in time for serving food to males and to females

or the sequential feeding, assures this differential allotment. Another practice which influences food intake of individuals is the ritual "fasting" on certain days. It will be observed that the practice of "fasting" is more common with women than with men. It needs to be mentioned here that "fasting" has not meant complete denial of food but rather change in food items. It has been reported that female fasts are more varied, numerous and austere than those of men (Khare 1976:62). In Lucknow, in the North, out of a total of 105 possible fasting days in the year, on an average, orthodox Brahmin women observed fasts on 55 days, while poor urban women observed from 5 to 15 days (McNeill 1986).

Observing the food habits among the population, Appadurai points out that a new bride and apprentice cook in an orthodox house, may eat last and alone but as a mother of a son she may be privileged to eat with her mother-in-law or other senior female members (Appadurai 1981:500).

While summarizing household surveys of individual diet in South Asia, Harriss (1986) concludes that there is evidence on differentials on intra-family food allocation and the explanation is essentially economic and cultural. In her opinion, economic explanations turn around discrimination as being an efficient survival strategy. Relative over-feeding of adult men has been explained as necessary for the major income-earner to secure work in uncertain and risky labour markets. Thus it is seen as a response to labour markets structured in favour of males. The cultural explanation of discrimination against women links food allocation to the subordinate status of women under patriarchy. Girls may be disfavoured because their income earning capacity (in those regions where they participate in wage work) is removed from the household when they migrate at marriage. Conversely, boys may be allocated preferential resources in order to attract brides. The relative deprivation in food is part of the socialization of girls into the roles of deference in service that they will play as future daughters-in-law. In turn this involves authority and complicity on the part of the mother herself. The notion of exclusion from items of food is a corollary of systems of classification of food which simultaneously emphasises rank, periodicity, auspiciousness and medicinal properties. Justification for lesser food given to girls is often offered as they are hardier and can manage with less, and in contrast, boys need more food since they work in field and need strength. Parents often are found explaining the discrimination of girls as a training given to them for their expected behaviour in the homes of their in-laws. This is considered necessary or else it will be a reflection on their upbringing by parents.

Some of the observations on survival in cases of severe famine may be worth noting. In the famine of 1978 in Southern India, those at the highest risk to their lives were the infants and those above age 50, and least vulnerable were those aged between 12 to 50. Male mortality was much higher and the population became more feminine. Similar observations were made for the Bengal famine of 1943 when it was observed that higher mortality was experienced by children in the ages of 5 to 10 and adults above age 50. Appadurai (1984:481-97) reports that during a famine in South India, there was an abandoning of women and children by men, thus concluding that in situations of food scarcity, the very young and the elderly followed by the women, are most expendable.

The available studies consistently indicate the discriminatory treatment of women in terms of influence on their health. This discrimination refers to non-availability of adequate and nutritionally satisfactory diet, non-availability of medical attention and in general, exposure to conditions causing ill-health.

From the experience of the now developed countries and that of Pakistan and Sri Lanka, what emerges is that for the improvement of female mortality, there is a need for improvement in the overall level of mortality. Since the improvement in overall level of mortality goes hand in hand with improvements in socio-economic conditions, it is obvious that such a change works in the interests of all the sections that are subjected to discrimination.

Women's Work-load & Its Impact on Health

The lack of primary survival needs — clean drinking water, adequately available nutritious food, healthy and safe housing — affects women more, causing a number of health problems, physical and psychological. But it is important to understand how women use their time, because both the pattern of activities and the total burden of responsibilities imposed from childhood onwards have a great effect on their health. Women work for longer hours at routine tasks such as fetching of water and fuel, cooking, childcare and working in the household production or wage employment. Girls start helping their mothers at a very young age in household chores and also have heavy family responsibilities that interfere with their education. "Three-fourths of the 50 million children who are not enrolled in any school are girls. It is estimated that 30 per cent of the total work of fuel gathering, fetching water and farm work is done by girls aged 6-11. Almost the entire burden of sibling care is on the girl child. Education influences mortality, morbidity and fertility through better knowledge and through a better social status" (Desai & Krishnaraj 1987:219:20).

It has been pointed out that in most families children who are not needed elsewhere are allowed to go to schools. Thus if a family has several children, not all of them have equal access to education. The economically better-offs in the villages are not very enthusiastic about providing facilities for education in their villages since they see it as antithetical to agricultural labour. Demand for children's education develops only when it is seen as a means of economic improvement for both children and parents. Skepticism prevails about the need to educate daughters because they are expected to get married and move away from the home and under these circumstances, they are not expected to contribute to the economic improvement of the family (Caldwell et al 1985:29-51).

Greenhalgh (1985:265-315) in an interesting presentation, discusses the issues of women's education and their employment outside the household. She points out that the fundamental source of women's subordination is the patriarchal family. This institution has in-built mechanisms to control women and their labour. She points out that despite the remarkable advances of East Asian societies in promoting legal, political and economic rights of women, historical perspective suggests caution in interpreting these changes. Using data from Taiwan, Greenhalgh points out that the traditional system of sexual stratification was perpetuated and even intensified with the rapid development of the economy. Though capitalism is often blamed for women's secondary status, the subordination of women prevailed even prior to capitalism and capitalist environment only provided the resources that the family system used to reproduce and strengthen traditional hierarchies. In her opinion, gender differentials are created from early childhood and the roots of sexual differentials are economic. Parents use different types of intergenerational "contracts" or expectations about mutual obligations in raising their sons and daughters. The root cause of different strategies used by parents in raising their sons and daughters is to assure best advance of their own interests.

In the patriarchal system, men's membership in the descent line is ascribed, women have to achieve it by producing and raising a male descendant. Women are "attached" to their father's and later husband's lines but in general become fullfledged members of a descent line only after they die when they become ancestors in their sons' lines. Thus, to ensure herself a modicum of status in this world and to secure resting place in the next, it is imperative that a woman marry and produce a son.

Greenhalgh points out that education is one of the 'gifts' given to children by their parents and fundamentally belongs to parents rather

than to the children. As long as parents were alive, children could not dispose of these resources as they wished, but had to use them in ways their parents approved. Educating children was an investment as a loan that had to be repaid by fulfilling a number of obligations such as obedience or filiality and large contributions to the family economy. Sons were obliged to support their parents. Daughters were educated so that they could return much of their "loan" before they got married. Daughters were, therefore, sent for employment as soon as they could, so that they could contribute to family economy, including education of their siblings, especially brothers. Investment in education of daughters was also expected to help in their marriage alliance for better socio-political contacts. Education as a value in itself has had very little recognition.

Differential educational attainment profoundly affects women's ability to support their families and to provide effective nutrition and health care. Most studies have shown stronger correlations between the infant mortality rate (IMR) and mother's education than between the IMR and father's education. One South Indian study found that the largest differentials in infant mortality were by mother's education, with a level of 130/1000 where the mother had not been to school, 80 where she had only primary schooling, and 70 where she had some secondary schooling (Caldwell et al 1982).

Educated women may be more informed about health problems. They may be able to manage health resources. "Literate mothers are more likely to break with traditional medicine and adopt new methods of child care. Their innovative behaviour might be better accepted by family members due to their educational status. Children may have to do less hard work, take fewer risks and live a healthier life. Educated women are more capable of travelling alone, seeking early medical care in case of illness, and asking questions of health professionals and following their instructions more accurately" (United Nations 1984:16).

Women take the major responsibility in keeping the family fires burning and they are saddled with long hours of heavy work that needs to be done throughout the year. Domestic labour is exhausting, unskilled and underpaid. Frequent pregnancies and most often chronic malnutrition and undernutrition are their lot. A woman's areas of work are the last ones to be reached by modern technologies. She fetches water from distant wells and rivers, collects and carries heavy loads of firewood, cooks on primitive hearths after doing gruelling work of pounding and grinding on heavy outdated gadgetry. Rearing children itself is a strenuous effort and a drain on her already poor health. And yet she has a consistently lower status in varying degrees. She is

excluded from decision making either at home or in the community. Discrimination, in short, pervades the whole fabric of her existence (*The Economic Times* 28-4-1985).

In measuring the work done by women, several attempts have led to frustrating results. It is repeatedly affirmed that the data collection shows a bias in favour of men. Women are relegated to the unpaid "family labour" category which in itself is very inadequately measured. "Non-farm activities" which take a larger share of women's time are virtually given no attention. In reality, the non-farm work done by women takes enormous time, is tedious and strenuous. It is also observed that this work of women is absolutely essential for the survival of the family.

In order to produce food in edible form, an enormous amount of work is involved after the harvest, which is the point where the official measurement of 'work' usually halts. Threshing, winnowing, drying, boiling (especially for rice paddy), and other activities have to be undertaken between harvesting and storage of many staple foods. Correct storage is also a major concern, since post-harvest losses of food can make all the differences between survival and destitution. As the food is used, exhausting work is again involved in processing it before cooking; for grains there is pounding, for example, and for cassava (also known as manioc), a lengthy series of processes to extract out the poisonous substances. Before cooking, an adequate supply of water and fuel needs to be obtained, and these two requirements can take up to several hours a day. Water is, of course, a basic need in its own right, and has to be available for drinking in fairly large quantities, especially in hot, dry weather. Fuel may be obtained in the form of firewood, dried animal dung or crop residues, and in far too many countries is becoming increasingly scarce and difficult to find. For water, fuel and especially wood, very heavy and strenuous effort is required to carry these to the place where food preparation is done. Finally, of course, there is the cooking, which with many staple foods takes a considerable time, especially if fuel supplies need to be conserved. Various condiments, spices and vegetables are needed to make the food palatable, and these have either to be gathered from the wild or cultivated as a separate crop which is also often excluded from the statistics on agricultural production. In many cases also, pigs, poultry and other livestock are kept and have to be watered and cared for. Apart from the preparation of food for home consumption, which constitutes the major part of subsistence agriculture, it is very important that any surplus production be marketed in order to produce some cash for the innumerable demands made on a family: taxes, school fees, clothing, food in times of shortage, and other basic needs. All of these

essential activities are performed by women as post-harvest work on the crops, storage, food processing, provision of water and fuel, cooking, provision of relishes, care of small livestock and marketing. All these tend to be relegated by development researchers to the despised 'domestic' sector and therefore, disregarded by all except the home economists (Rogers 1980:152-53).

Women not only work for longer hours but do strenuous, back-breaking tedious jobs which men do not like to do. They also consume more energy. Much of women's work remains invisible and not compensated. Development agencies ignore them because they are not considered as head of the households and employers pay them low wages because they are "supplementary" earners, despite the fact that most women work for family survival. An estimated 18 to 30 per cent of families are solely supported by women. In many others, women's contribution to their families is substantial.

There is a great disparity between women's calorific expenditure (working outside the home and doing all chores in the home) and calorific in-take (they often have nothing to eat after the husband, sons and daughters, in that order, have eaten). This manifests itself in illness, especially anaemia. Interventions at the time of maternity alone are not likely to make any impact on the wellbeing of women. Most MCH programmes are child-centred and neglect the mother as a woman (Gnanadasan 1986:1630-32).

"The scarcity of other energy resources in a rural area creates a demand for human energy, particularly in survival-related tasks. When human energy is expended, women contribute the greatest share. But in comparison to this energy output, women get a lower share of food intake, and face a nutritional deficit. Added to the work burden, women also suffer further energy deprivation due to repeated pregnancies and breast feeding, high morbidity and intestinal infestations. Health care can alleviate this burden to some extent, but women apparently have less access to health care facilities due to the nature and structure of these services. These factors naturally affect all the poor, but women are more seriously affected because of their low status and their social and economic roles" (Battiwala 1984:77).

The changing patterns of economic development have put an additional burden on women for family survival and which is reflected on their health. The change of work place from home to the factory, landlessness due to marginalisation of farmers, and male migration are some of the factors which affect women's health adversely. Many development activities have actually harmed women and their family

nutritional status by concentrating cash income in male hands, by reducing local food production in favour of cash crops, and by creating employment opportunities that cause men to leave their families. The development planners have failed to take account of women's traditional activities and roles.

Economic Valuation of Women

Women in many countries are considered less important than men for economic development and for the survival of the family. Most women work for family survival, yet their work is undervalued. This has direct relationship not only to the son preference but also to women's health.

The data from Sample Registration Scheme (SRS) show the difference between the North-West and the South in sex disparity and child survival. In Punjab, Haryana, Himachal Pradesh and Uttar Pradesh in particular, the death rates of female children (in the 0-4 age group) are consistently and substantially higher than that of males. In contrast, Andhra Pradesh, Kerala and Tamil Nadu have a female to male child death rate ratio that is significantly below the average for India. The pattern in West and Central India is somewhat erratic but not in general very different from the all-India average. As an explanation of these variations, Bardhan (1974) says that these regional variations are indicative of differential neglect of female children in terms of relative economic valuation of women, the latter depending on ecological variations in agricultural productions (paddy, for example, being more intensive in female labour than wheat) and the associated levels of female participation and earnings. In other words, where female participation and incomes are relatively high, the female child is likely to be regarded less of a liability than in other areas. Bardhan further says that economic undervaluation of an adult woman may reduce her bargaining power or 'voice' in family decisions like intra-household allocation of child care, and this may result in the neglect of female children.

In a note on sex disparity, Bardhan extends his above arguments to the situation of son preference and points out that variations in son preference are not unrelated to variations in economic opportunities for women. Table 3.3 presents data on annual wage income per woman to that per man in agricultural labour households (called FMWR) in rural India, 1974-75. Table 3.4 gives Statewise estimates of the ratio of female to male death rates in the 0-4 age groups (called FMCHDR) in rural India, 1974-75. The relationship as measured by correlation coefficient shows that its value is -0.61 , indicating there is some statisti-

cally significant evidence across rural India that in States where the relative wage earnings of women are high, on an average, the female child has a better relative chance of survival.

Table 3.3

THE RATIO OF ANNUAL WAGE INCOME PER WOMAN TO THAT PER MAN IN AGRICULTURAL LABOUR HOUSEHOLDS IN RURAL INDIA, 1974-75

Andhra Pradesh	0.53
Assam	0.25
Bihar	0.33
Gujarat	0.52
Haryana	0.10
Himachal Pradesh	0.13
Jammu & Kashmir	0.11
Karnataka	0.50
Kerala	0.34
Madhya Pradesh	0.60
Maharashtra	0.44
Orissa	0.25
Punjab	0.06
Rajasthan	0.36
Tamil Nadu	0.41
Uttar Pradesh	0.19
West Bengal	0.17
India	0.33

Source: Rural Labour Enquiry Report, 1974-1975. Annual wage income per man (woman) has been calculated by multiplying the estimated average number of days worked in wage employment by the estimated average daily wage earning by the number of wage earners, divided by the number of men (women) belonging to the agricultural labour households. This table is presented by Bardhan in his paper "On Life and Death Questions", *Economic and Political Weekly*, Special Number Vol.9 No.32-34 (August 1974).

Table 3.5 presents a simple index of reported son preference in different states in a survey of urban and rural attitudes in family planning during 1971 (the index called SPI defined in the table is 0 where there is no preference for particular gender). The correlation co-efficient between SPI and FMWR is -0.43. In other words, in States where the relative wage earning of women is low, the index of son preference is, on an average, relatively high.

Table 3.4
RATIO OF FEMALE TO MALE DEATH RATES IN THE 0-4 AGE GROUP IN DIFFERENT STATES OF INDIA

	<i>Rural</i>	<i>Rural</i>	<i>Rural & Urban</i>	<i>Rural & Urban</i>
	<i>1969</i>	<i>1974-1976</i>	<i>1974-1976</i>	<i>1980</i>
Andhra Pradesh	1.00	0.99	0.99	0.77
Assam	0.81	0.97	0.96	0.96
Gujarat	1.19	1.07	1.05	1.10
Haryana	1.14	1.28	1.28	1.35
Himachal Pradesh	n.a.	1.08	1.15	1.19
Jammu & Kashmir	0.91	1.05	1.09	1.10
Karnataka	0.94	0.99	1.02	1.13
Kerala	0.93	1.06	1.05	0.98
Madhya Pradesh	n.a.	0.99	0.99	1.13
Maharashtra	1.03	1.00	1.03	1.18
Orissa	n.a.	1.11	1.10	1.03
Punjab	1.53	1.29	1.28	1.27
Rajasthan	1.19	1.09	1.14	1.08
Tamil Nadu	1.03	0.99	0.97	0.97
Uttar Pradesh	1.49	1.36	1.24	1.17

Source: Sample Registration System data available from the Office of the Registrar-General of India, 1980. Figures are provisional. This table is reproduced from Bardhan's paper (Op. cit).

A girl's chances of survival are reported to be related to her anticipated earnings as an adult and to the size of the gender gap in daily earnings. In this context, it is important to note that most of the productive work of women in family production is unpaid. As workers, their wages are lower by 50-70 per cent. Low status leads to discriminatory feeding and health care for young girls and sometimes, to overt female infanticide. It also affects participation in family decision-making and resource allocation.

Table 3.5

VARIATIONS IN AN INDEX OF SON PREFERENCE IN INDIA, 1971

Andhra Pradesh	8.95
Bihar	24.34
Gujarat	20.77
Haryana	20.69
Karnataka	11.24
Kerala	17.24
Madhya Pradesh	21.91
Maharashtra	18.37
Orissa	15.71
Punjab	28.99
Rajasthan	31.34
Tamil Nadu	11.48
Uttar Pradesh	25.00
West Bengal	18.42
All India	20.23

Source: Bhatia (1978) on the basis of a survey of urban and rural attitudes to family planning during 1971. The index of son preference is calculated as $100 \frac{E}{C}$, where E is excess of the number of sons considered 'ideal' by the respondents over the number of daughters and C is the number of children considered 'ideal'. The index is zero when there is no preference for any particular gender. Table reproduced from Bardhan's paper (op. cit).

Impact of Reproduction on Health

Reproduction dominates women's special health problems. Each pregnancy, delivery and post-partum period is a drain on women's health. The World Health Organisation (WHO) estimates that 500,000 women die each year from causes related to pregnancy. Approximately half of all women in the reproductive ages and two-thirds of pregnant women in developing countries are anaemic. Severe anaemia during pregnancy is associated with a high incidence of premature births, post-partum infection and strokes. For many women, it leads to death during abortion or childbirth. Women have very little voice in decision-making. They have no control over their fertility. In addition, due to lack of knowledge and access to contraceptive information and services, their pregnancies are too closely spaced and more than desired. Motivation for regulating births in societies where a woman's status depends on her capacity for child-bearing, is low. This further acts as a barrier to acquiring knowledge and access to contraceptives. This leads to infant and maternal deaths.

In the developing countries as a whole, infant mortality is five times as high as in the industrialized countries. Infant mortality is a sensitive indicator of maternal and child health as well as of public health and the socio-economic conditions of the community. The World Fertility Survey data show the relationship between high infant and childhood mortality rates and the number and spacing of children, and babies born of teenage and older mothers. Short birth intervals mean a regular risk to the mother as well. Repeated child-bearing with short birth intervals leads to the "maternal depletion syndrome".

The World Health Organization (WHO) convened the first international regional meeting on prevention of maternal mortality (Geneva, 11-15 November, 1985) to promote world awareness of this vexing public health problem. Participants of the meeting who had carried out studies in 21 countries highlighted some of the reasons why women die in pregnancy and childbirth. These were, poor coverage of the health care system, lack of transport and facilities for dealing with emergencies, lack of family planning to avoid too frequent, closely spaced births and of births at unfavourable ages of mothers, unwanted pregnancies with the associated risks of illegal abortions, and conditions related to malnutrition and poverty (WIN NEWS 1986: 25).

Age at marriage is a crucial factor. Maternal mortality rates for girls under 16 are more than for grown up mothers. Low age at marriage not only affects young mothers but leads to high risk, and low birth weight infants.

As per a study undertaken by a team of doctors at the Goa Medical College in Panaji of the obstetric behaviour in 429 cases of teenage gravidae, mothers under 16 were found to have had the worst obstetric performance, with maternal complications like Pregnancy Induced Hypertension (PIH), anaemia, caesarean section rate, incidence of low birth weight deliveries and perinatal mortality. The incidence of PIH in mothers between 13-16 age group was over twice that of those between 17-19.

According to a study conducted by the Family Planning Foundation, marriage and pregnancy before 18 is common among the poor in many States in India. The study was taken up to investigate the critical factors responsible for high infant mortality among the poor in 800 villages in 33 districts of five States, viz. Uttar Pradesh, Madhya Pradesh, Orissa, Karnataka and Maharashtra. It covered nearly 10,000 households, 25,000 mothers who had experienced live births in the last two years and 2,500 grassroot health workers.

Nearly 25 to 58 per cent of girls from the poor families in these States not only marry early but also become pregnant before the prescribed minimum marriage age of 18 years. The study revealed that in the rural areas of Uttar Pradesh and Madhya Pradesh over 90 per cent of the women in the reproductive age group are married before 18 years.

In the hill districts of Uttar Pradesh, rural districts of Karnataka and slums of Bombay, the percentage of women getting married before 18 was 71.77 and 76 respectively. In the tribal areas of Orissa and urban areas of Karnataka, it was 58.

Pregnancy before 18 years was found to be 50 to 58 per cent in Madhya Pradesh, 26 to 38 per cent in Uttar Pradesh around 48 per cent in rural Karnataka and slums of Bombay and 29 to 33 per cent in tribal Orissa and urban Karnataka.

The study revealed that the infant mortality rate among babies born to women below the age of 18 years was much higher than in the case of those born to women above 18 years. It also showed that the infant mortality rate was two to three times higher among women who could not complete the term of their pregnancy and delivered low weight babies due to malnourishment and poverty (*The Hindustan Times* 28-12-1987).

The Registrar-General reported that 47 percent of the total deaths in India were under age 5, even when the percentage in the population of children in this age group was only 15. He further reported that almost 18 per cent of the total deaths were in the first four weeks of life and the percentage in first year was about 30 (Padmanabha 1982). A positive relationship between infant mortality and fertility was established to be statistically significant in a cross-sectional study by using data for 41 nations (Mandelbaum et al 1968:1999-2004). Another analysis of the data on fertility and mortality indicated that for a unit increase in infant mortality rate (IMR), increase in crude birth rate (CBR) was 0.17 units, while in general fertility rate (GFR), it was 0.76 units (SRS 1978).

The causes of deaths of the infants are mainly due to the poor health of the mothers, their low nutritional level and inadequate antenatal care. Due to malnutrition and undernourishment, they produce weak babies who do not survive. To save a few, they go through repeated pregnancies with short intervals between the two. Malnutrition is the cause of acute problem of biological racial decay. These malnourished mothers give birth to malnourished children who will be the future parents. Without raising the health status of women which is linked with the socio-economic status of women in general, and the attitude of society to

women, the target of reducing IMR to 60 by the end of the century as the objective of Health for All Plan of the Government of India, will remain only on paper.

Mehta and Jayant (1981:183-214) had conducted an epidemiological surveillance of maternity care to understand the causes of perinatal deaths. The data were collected from 123 medical centres located in different parts of the country reporting 10,285 singleton perinatal deaths. They found that the perinatal deaths were significantly more prevalent among women from rural residence, of poor to fair health, from families of low monthly income, poor education, those engaged in manual occupations and those suffering from severe anaemia, of advanced reproductive age, grand multi-parity and having experienced repeated perinatal and neonatal death. Further analysis of the data showed that maternal health and reproductive health outweigh in importance socio-economic status in perinatal survival. Among maternal health, major contribution to perinatal loss was made by anaemia. For instance, 29.3 per cent of all women with perinatal death suffered from anaemia, if 8.5 Hb/100 is taken as the cut-off point.

Reporting on 1086 perinatal deaths from ten institutions, Pachauri and Jamshedji (1980) concluded that the primary foetal/neonatal conditions categorised as asphyxial/anoxia which were responsible for two out of every five perinatal deaths were associated with prematurity in more than 20 per cent cases, with maternal complications in almost 40 per cent, with abnormal presentation at delivery in 20 per cent, with low birth weight and low gestation in two out of five cases. Mehta (1980) comments that though foetal/neonatal asphyxia had been an important causative factor (in perinatal deaths), quite often these cases are reported as having died due to 'inadequate resuscitation' or 'inadequate facility to care for newborn'. In his opinion, invariably these babies were low birth weight babies and the causes lay in the category of 'preventible', since most of these are a result of anaemia, lack of ante-natal attention and due to medical diseases among mothers.

Similar observations were made by Sharma and Saxena (1982) on the basis of data from Jaipur; Badhwar, Vijaya and Vaidya (1980) from Bombay; Yadav and Nayak (1980) from Pondicherry; Roy Chowdhury and Sikdar (1981) from Calcutta; Bhargava, Karna and Pant (1981) from Ajmer; and Lakshmi Devi and Singh (1982) from Manipur. Indra and Pal (1982) point out that perinatal mortality is affected by many influences other than the availability of medical care and the efficiency with which it is given. Devi (1980) and Krishna Menon (1981) in their independent works, state that in more than half of the premature births, no definite

cause can be found other than malnutrition of large majority of the mothers, its influence on their height and weight of the babies at birth. Diseases present among the mothers complicate the pregnancies and these are gastro-intestinal disorders, infective hepatitis, anaemia and tuberculosis. Post-mortem investigations of 175 maternal deaths were compared with clinical diagnosis. It was found that causes of deaths were assigned as haemorrhage, toxemia, eclampsia etc. whereas "At post-mortem, one is surprised to find unexpected conditions like miliary tuberculosis, cerebral infarction, perforated peritonitis and even haemangioma of spleen" (Seth et al 1985:549-552).

The problem of maternal health and its effect on child were highlighted by Srikantia. He says: "Every third child living in rural India is anaemic and every alternate pregnant woman suffers from anaemia during the last three months of pregnancy. The meaning of the problem becomes clear when we realise that 20 per cent of all maternal deaths in the country are due to nutritional anaemia. Severe anaemia is one of the important reasons for abortions, premature births and low birth weight of infants" (quoted by Venkatachalam 1962:198).

A check up by medical and paramedical group among rural populations showed that incidence of anaemia was higher among women than among men (Sawarkar 1985). This indicated that besides the effects of poverty, neglect of their health was an additional handicap faced by women. According to Dr.S.Jha, nearly 10,000 women die of childbirth and abortion every year, a figure which is more than 100 times higher than that for any developed country (*Indian Express* 31-7-1984).

Neglect of Women

The women's movement and the health movement in India have brought us to the realisation that the ill-health of women hinges on a wider concept arising from existing political, economic and social norms in which women are second-class citizens.

Women are neglected by society. The heavy loss of life due to clearly avoidable causes indicate social indifference to the situation of women in India. This is supported by the report on medically certified causes of deaths from urban Maharashtra. Of the total 40,873 female deaths, 3,955 or almost one in ten (9.7%) had accidents and injuries as a cause. More shocking is the fact that 2,567 or two out of three (64.9%) of these were due to "burns" (Karkal 1985).

In a survey in the Dharavi slums of Bombay, it was found that 70 to 75 per cent of women suffer from anaemia, 60 to 70 per cent complain about general weakness, 50 to 60 suffer from chronic malnutrition and

B-complex deficiency, 25 to 30 per cent suffer from repeated attacks of gastroenteritis, helminthic infestations and pain in abdomen, 15 per cent complain of upper respiratory tract infections and 13 to 15 per cent suffer from skin infection like scabies, pediculosis and pyoderma. Apart from these common ailments, they also suffer from pulmonary tuberculosis, urinary tract infection, typhoid, infective hepatitis, malaria, leprosy and chronic diseases like diabetes and hypertension. Smoking, tobacco chewing, alcohol and drug addiction are not uncommon in observed slum population and affect women's health (*The Economic Times* 28-4-1985).

Reporting on a malady such as blindness, which is much more prevalent in the Indian subcontinent, Cohen (1987) points out that aetrogenic induced loss of vision, eye damage due to accidents, trachoma, cataract and noncorneal signs or symptoms of eye disease due to Vitamin A deficiency show sex differentials. This is mainly due to barriers in access to treatment. He reports that paddy husking causes serious corneal injuries in women and they go for hospital treatment very late. Trachoma is exceptionally prevalent in women who have the closest contact with infected children. Higher cataract rates for women are due to more severe dehydrating diarrhoeal episodes and malnutrition.

In a recent survey conducted by the National Survey for the Prevention of Blindness, it has been found that girls were most neglected where eye care was concerned (*The Statesman* 6-3-88).

Differences in perception of health are also brought to light in studies by medical specialists enquiring into perinatal deaths in different parts of India. Invariably the mothers, in addition to their anaemic conditions and poor antenatal care, had several health problems which were neither identified nor treated earlier (Karkal, 1985). This is further reinforced by a study on maternal mortality which showed that though clinical diagnosis of the maternal deaths were due to obstetric causes, postmortem investigations revealed that the women suffered from several health problems and pregnancy was only a precipitating cause (Seth et al 1977).

Access to Health Care

Studies on utilisation of health facilities consistently point out that women avail of medical facilities at much later stages of their health problems.

In India, despite higher morbidity among females of all ages, treatment is sought often only for males. A higher percentage of ailing

men than women get medical treatment and a higher proportion of services are offered to men. For example, a survey in Maharashtra showed that a higher proportion of ailing boys (under 15) got treatment than girls. Adult women usually got no treatment or only traditional treatment or used home remedies while adult men availed of institutional health services. While more females suffer from malnutrition, hospital admission for malnourished males is higher. Females are brought to hospitals at later stages of a disease than males (Chatterjee 1984:21-24).

Mitra (1978), reports gender differences in child mortality rates from respiratory, gastro-intestinal and vitamin deficiency diseases. He points out that the differences in morbidity or differences in treatment are largely due to later stages in illness at which girls are brought for treatment. Paediatric wards show higher male mortality, not because females are healthier, but because male children are rushed urgently for medical treatment, while female children are allowed to languish at home to see if they improve on their own. At Safdarjung hospital, 65 per cent paediatric admissions are boys, only 35 per cent are girls (*The Economic Times* 28-4-1985).

Neglect of the female in her access to treatment, especially at younger ages, may be the most important influence on female health. Women should normally use health facilities more than men because of their poorer nutritional status and childbearing and childrearing responsibilities.

One of the most important reasons for non-utilisation of health services in the case of females is the distance of the health centres from the residence. Moreover, they require permission from elders and society demands that women may only go out with a proper escort to the centre. They also need money and transport facilities for going to the centre but have very little access to the resources. It is equally true that women are assigned tedious daily chores and they find it difficult to free themselves from these daily routines. The queues at the health centre and the general indifference of the medical staff to their difficulties are also responsible for the reluctance on the part of females in availing of medical care.

From the discussion so far it should be obvious that the problems faced by the women and the causes of their morbidity and mortality cannot be overcome by simplistic measures such as use of "medical and social expertise and training of birth attendance". Maternal mortality in India is one of the highest in the world and though exact figures are not available, estimates range from 500 to 800 per 100,000 births

(Government of India 1981). Women are unable to use the health care system because of social and cultural taboos that restrict their mobility. The lower status of women and their upbringing which expects them to be subservient and tolerant, prevents them from perceiving their health problems. The transport facilities are essentially under the control of men and indifferent attitude to fertility regulation is an obvious effect of social value of the women which very much hinges on her role as a mother and home-maker.

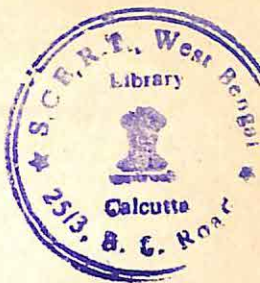
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4

WOMEN'S ISSUES AND POPULATION POLICY IN INDIA

The available data on the health of the population and especially those of women and children, indicate that the health situation of women in India is very poor. India is one of the exceptional countries in the world where women have a higher mortality than men. The gap between the life expectancies of men and women is widening, indicating that over the years women have got a lesser share of the benefits of improved health conditions. The overall picture also indicates that though the death rates have declined, infant and child mortality has shown very little change. It is observed that there are wide variations in vital rates of the population of the states. Uttar Pradesh reports a birth rate of 40.4 and death rate of 20.2 while the corresponding figures for Kerala are 25.2 and 7.0. More important is the finding that though Kerala reports a higher acceptance of family planning and lower infant and child mortality in comparison to states such as Uttar Pradesh, the nutritional level of infants and children in Kerala is far worse. This leads to the conclusion that the limitation of births as is done today, does not assure better quality population (Karkal 1986).

The researchers have shown that the mother's health is the most important factor for high infant mortality in India. The health status of women in India is very poor due to their poor socio-economic status in the family. The Committee on Status of Women in India reported, "the cultural norms that particularly affect women's health are the attitudes to marriage, age of marriage, the value attached to fertility and sex of the child, the pattern of family organisation and the ideal role demanded of

the women by social conventions. They determine her place within the family, the degree of her access to medical care, education, nutrition and other accessories of health.... Cultural insistence on the marriage of women in the early phase of their child-bearing period, leads to high fertility rate and each additional child is a burden on the mother, affecting her physical and mental health.... Furthermore, women's nutritional requirements are often sacrificed to provide a little more nutrition to others in the family. The incidence of diseases caused by malnutrition is higher not only among adult women, but even female infants" (Government of India, 1974:119).

High infant mortality is considered as one of the factors responsible for non-adoption of small family size norm in India. Parents may be required to produce more children than necessary in the hope that at least a few would survive into adulthood. As long as the proportion of children who die in childhood remains substantial, there is a major psychological obstacle to be overcome in promoting family limitation (Taylor et al 1976). A positive relationship between infant mortality and fertility was established to be statistically significant in a cross-sectional study by using data for 41 nations (Heer & Smith 1968).

To improve the health of the population, it is very important that greater attention be given to the socio-cultural conditions that determine the health of women. This will not only change the conditions that affect nearly half of the population that is women but will determine the health of the children and the adult men and women. Thus seen from the narrow angle of population situation, measured only in terms of levels of birth and death rates, significant changes cannot be made unless social attitude to women undergoes drastic changes. Constantly, new findings indicate that in planning a programme for development, mere averages do not have the desired impact. It is essential that the policies assure distributive justice. In this sense, population policy must be directed to socio-economic change for better life, not for only a section but for each group that at present experiences low status.

Unless there is a basic change in the attitude underlying planning, the results of the programme with narrow objectives are unsatisfactory. Evidence of this is available in the functioning of the efforts to improve the health of women and children. The programme that is currently directed towards this is the programme of Maternal and Child Health (MCH).

The second ORG (Operation Research Group) survey brought out that at the national level, 62 per cent of the couples were not aware of Maternal and Child Health (MCH) services. Of the remaining 38 per

cent, only 18.4 per cent had ever availed of these services (Khan and Prasad 1982).

Mother and Child Health Programmes have not reached the women in India. An executive summary of the Community Needs Assessment brought out that more than 40 per cent of the currently married women in half of the 14 districts selected from five states, as opposed to the medical opinion, believed that a child who has diarrhoea should not be fed. In eleven of these selected districts, more than 10 per cent of the women thought that a child with diarrhoea should not be given even water. It is really surprising that many of the female health workers shared the same negative attitudes of the population they serve. In Latur and Parbhani districts of Maharashtra, more than 80 per cent of the female health workers thought that it was not proper to feed a child with diarrhoea. In other districts, usually more than one-fifth of the female health workers held this opinion.

In almost all of the project districts, more than 40 per cent of the currently married women had not heard of oral rehydration solution (ORS). Similarly, the actual use of oral rehydration solution was low in most project districts—rarely exceeding one-third of the currently married women.

Attitudes against feeding children were also prevalent for children with measles. In most project districts, about half of the currently married women thought one should not feed a child with measles. Even among the female health workers, many believed one should not feed a child with measles. In Latur and Parbhani districts of Maharashtra, more than 60 per cent of the female health workers shared this attitude. In other districts, the percentages were lower but usually exceeded one-fourth of the workers. With respect to diseases that can be prevented by immunization, the knowledge of currently married women varied by district. In Mohindergarh district, Haryana, more than 60 per cent of the women did not name diphtheria, whooping cough, tetanus, polio or tuberculosis.

Due to the low levels of knowledge about what diseases can be prevented by immunization, it is not surprising that many women did not contact health personnel to immunize their children. This percentage is low in most districts. The percentage of currently married women who contacted health personnel for immunisation is less than 20 in Osmanabad and Latur districts of Maharashtra (Government of India, 1985).

Safe motherhood and child survival are the new slogans, and there is added emphasis on the MCH programme as an essential element of

population control strategy. The thrust of the MCH programme is reflected in the new slogan, "Immunisation for all by 1990". It is important to realise in this context that additional monetary inputs for the immunisation programme are not enough to make a success of the programme because of the problems of logistics in implementing the programme. The new issue in population control which has come to the attention of our policy-makers is the issue of infrastructure development. We may have all the vaccines for immunisation and yet nothing may work in large parts of India because of lack of fulfilment of preconditions like physical accessibility. For example, a vaccine must be kept at a particular temperature in a refrigerator.

The new population control strategy borrows quite heavily on the Chinese experience. This is where one has serious doubts. Though the new policy outlined by the Government includes better health care and higher literacy, especially female literacy, while in themselves these objectives are laudable, the Government seems to have got its priorities wrong.

The Chinese success story, apart from the advantage of having a totalitarian system in which a certain element of compulsion could be imposed, was largely due to the fact that the basis for effective birth control had already been laid. China had built up an excellent public health and medical care system several years ago. Average life expectancy in that country is now nearly 70 years, which is almost on par with the West, whereas it is a little over 50 in India.

"A one-child family makes sense in China because that only child has excellent chances of living to a ripe old age, while in India, even a two child family does not yet have the same assurance. China's literacy rate, too, is very high, almost double that of India. Health care and literacy have an almost symbolic relationship with family planning. Unless there are dramatic strides in these fields, the so-called new strategy for controlling the country's population increase will be fatally flawed and its goals totally unrealistic" (*The Indian Express* 10-7-1986).

Several studies have pointed out that the network of health services that is established under the Government programme lays far greater emphasis on the family planning programme. This happened due to the bias in the Government policy which lays greater emphasis on the reduction of the population. The programme gives target for achievement to the Primary Health Centres. These in turn give target to the staff as well as to the sub-centres. On the one side, the staff has a motivation to undertake family planning work since it has financial incentives. On the other, strict disciplinary action is taken against the staff that cannot

fulfill the targets that are given. As a result, it is observed that even when the health services are expected to work in solving the health problems of the community, much of the resources, manpower and material are spent on family planning programme. Fertility regulation is certainly in the interest of women but with a wrong approach the results are unsatisfactory.

It is unfortunate that the family planning programme of the Government of India has shown a major shift from its initial objective of health and welfare of the mothers and children to the programme of population control. Much of the effort to control population is concentrated on the distribution of family planning methods. There is an urgent need to look at the people and to improve their quality of life for long-term effect on fertility behaviour. Family welfare programmes should be looked at as a long-term investment for a better way of life.

It is seen that in practice, far from integrating birth control into a maternal health care package, excessive emphasis on the former is resulting in nullifying even the available potential of the latter. The primary causes of maternal mortality remain more or less untouched, safe management of pregnancy and childbirth having been displaced by a stress on elimination of pregnancy. As Sheila Zurbrigg points out, the targets are set for sterilisation but not for health care. "The final blow to trust between villager and health worker is family planning promotion.... Villagers have come to view most health services with the suspicion and negative feelings they have for family planning and therefore tend to reject both."

It is in this context that Gopalan (1985) points that though China's achievements in lowering birth rate are lauded, it is often forgotten that in China, the 'health revolution' and 'nutrition revolution' preceded the country's major thrust in fertility control. He adds that much of the failure of child health/nutrition and family welfare programmes may perhaps be traced to our failure to support and strengthen the woman in her playing the pivotal role in ensuring and safeguarding the health of the family. Gopalan also says that fertility programmes cannot be a proxy for direct improvement of socio-economic and nutritional status of poor population groups.

Mention must be made of the findings of the work of the Comprehensive Labour Welfare Scheme of United Planters Association of Southern India (UPASI). The project engaged 'link-workers' to promote health of the workers. Sixty per cent of these were women. It was felt that this (appointment of women) helped in meeting the unmet needs and demands in increasing fertility option for women and bringing them

closer to health service. Special emphasis was laid on programmes for improvement in the health of women, including conditions to improve the Hb count and eradication of anaemia. It was observed that improvement in the health of women led to the lowering of absenteeism and substantial increase in the output of work. Anaemia is very widespread, especially among women. Undernourishment and neglect during illness are basic reasons for the low Hb count of women. It was seen earlier that the poor health condition and presence of anaemia is at the root of high infant and child mortality and overall poor health of population in India. The UPASI project found that even a little attention to the problems of women can show substantial results. A group of 240 women workers were selected for studying the effect of anaemia on their performance in respect to plucking. Half of them were given iron supplement for 100 days at the end of which period, their plucking performance improved by 50 per cent as compared to women workers who received no supplementation. The number of days worked by women taking iron tablets increased by 34 per cent. All of them reported a sense of well-being and stated that they went to work more regularly because they did not feel tired. Even the supervisory staff found them to be less irritable.

The earlier-mentioned UPASI work came to the conclusion that health interventions aimed at women workers proved to be investments in productive asset which is the plantation worker and the intended outcome is improved worker health and output. UPASI has promoted the philosophy among the plantation management that health is to be viewed as a long-term investment rather than a stationary expenditure. UPASI, therefore, has a comprehensive health approach apart from disease management, family welfare, maternal and child care, environmental and personal sanitation, water management and health education. "The total health of the individual, the family and the community must be improved and the small family norm as one important means to that end must be perceived as a felt need by the family and community" (Anubhav Series 1987:7). It is not surprising that UPASI programme that covers 250,000 population has shown a decline in birth rate [40.1 (1971) to 21.8 (1984)] and infant mortality rate [119.5 (1971) to 48 (1984)]. Contraceptive prevalence rate is 48.9 per cent.

Against this background, the review of the family planning programme in India becomes very important. Women figure largely in programmes for fertility control with research and advice on family planning usually directed towards them. Sterilization contributes most to India's family planning programme. The larger share of sterilization is borne by women and female sterilizations show an increasing trend.

Considerable variations exist in acceptance rates by states. Invariably, states with higher acceptance rates have 90 or more per cent of acceptors who are sterilized. Also over 90 per cent of the sterilizations in these states are tubectomies. Female sterilization requires the patient to be hospitalized with increased expenses as well as negative response, since women in the hospital find it difficult to be away from home. To reduce the stay of women in the hospital, laparoscopic sterilization is widely used. The programme carried out under these conditions shows a death rate of 10-12 per 100,000 laparoscopic sterilizations compared to an acceptable figure of 0.25 to 0.5. A study of 9,066 laparoscopies conducted in camps over ten years reported surgical difficulties for 7.9 per cent of the clients, complications for 5.3 per cent, and failure rates of 0.6 per 100 women. The Indian Association of Gynaecological Endoscopists has registered its concern over the use of this method (Prakash 1984). The government's anxiety to reduce the birth rate is seen in the promotion of laparoscopic sterilization in spite of experiences of the specialists in the field.

Over the past two decades, the conflict between women's issues and population policies has sharpened and intensified. The family planning programmes grossly neglect women's health but make them victims of experimentation of the programme. It needs to be noted that there are many women who are prepared to cross traditional barriers and plan their families but they do not have autonomous status in the family to make decisions for themselves. Family being the basic unit of production and reproduction in a predominantly subsistence economy like ours much reproductive behaviour is conditioned and controlled by the family group. Men generally appear to be less interested than women in family planning because they do not have to bear the burden of pregnancy and child care. Added to this is the fact that society respects a man with a macho image. Since all important decisions regarding family are taken by men, women are not in a position to undertake contraception unilaterally.

It is in this connection, the Government of India's acceptance of the recommendation of the Fourth Pay Commission that maternity benefits be given only up to the second child to encourage small families is criticized as unjustly burdening women with the responsibility of limiting family size. In Indian society, the fact that it is the woman who bears the children does not mean it is for her to decide on the number of children to have. Then there is the overwhelming desire for a male heir, since the women's entire position in the family is dependent on her being the mother of a male child. Withholding maternity benefits is hardly going to dissuade a man from trying for a son after the birth of two or more

daughters. Moreover, not being able to get maternity leave would compel a woman to work till the last possible date before delivery and rush back to work at the expense of her health and that of her child. Any scheme of incentives and disincentives should be aimed at both the man and the woman.

A National Consultation on Women and Health called "for a re-evaluation of population control programmes. Recognising women's right to take control of their bodies and reproductive capabilities and their right to choose safe and effective contraceptives, it was felt that women need not inflict on themselves injuries by using inadequately tested and unreliable birth control measures. Increasingly, women have become the only targets of the family planning programmes, and the setting of targets has encouraged rampant coercion. Concern was expressed at the introduction of new long-acting injectable contraceptives of unproven safety for the testing of which women are being used as guinea-pigs and which could become part of India's mass target-oriented family planning programmes. There is a dire need to evaluate all the methods used in the programmes, particularly from the point of view of women's overall comfort rather than purely from the objective of reducing numbers" (Gnanadasan, 1986:1630:32).

Review of Family Planning Programme in India

India was the first in the world to adopt family planning as a state policy. Indian family planning programme began with the objective of health and welfare of mothers and children. During the period of the first three five-year plans, several Knowledge, Attitude and Practice (KAP) studies were conducted which overwhelmingly showed positive response to a small-sized family (Berelson 1963). The objective of the Government was to provide services according to the choice of the couples.

Observations, however, show that the family planning programme has usually been method-oriented rather than client-oriented, and in spite of the policy statement that the family planning in India is based on the cafeteria principle, women often do not have access to methods of choice or an option to discard a problematic method and choose another. They are not given full information about the possible side-effects and long-term risks of the methods they are persuaded to accept by target-oriented health personnel. They fail to get sympathetic treatment when they experience side-effects and there is practically no follow-up care. In the enthusiasm for achieving targets, basic safety norms are flouted and women's health is allowed to suffer (Balasubrahmanyam 1987:24).

It is worth noting that the World Health Organization (WHO) has well-laid guidelines for the delivery of contraceptives. India is a member country of the organisation and is, therefore, bound by the guidelines. WHO clearly states that the couple must be counselled on the method of fertility regulation. They should be carefully explained the benefits and risks of each method of contraception. The couple should be allowed to make its own choice for the method they desire to use. The side-effects of the method should be fully explained and assurance must be provided that the couple should be free to come back for further consultation and advice as well as for any help they need. The WHO guidelines also provide details on the physical examination the women should be given before certain methods are prescribed. The immediate as well as long-term follow-up of care and routine health care facilities should be available for the promotion of methods of contraception. If these ethical and safety rules cannot be adhered to, the Health Ministry has no justification for launching intensive programmes involving a large number of women (Balasubrahmanyam 1986:69-71).

In her critical appraisal of family planning in India, Karkal (1986) shows that from the Fourth Plan onwards, there was a clear shift in the family planning programme: from a programme for the health and welfare of the population to a programme of population control. It introduced time and target oriented approach to family planning. The evaluation of the programme became in terms of 'births averted'. With the bias towards 'averting births', the emphasis of the programme was on one-time motivation methods, though the officially stated approach was 'cafeteria'. With the failure of intra-uterine devices (IUD) in gaining acceptance, the widely promoted method was sterilization. Further, the government also liberalised the laws on abortion in 1971 as one more measure to control population. The desperation to reach family planning targets led to excessive 'persuasion' and 'coercion' which in turn created a negative attitude to the programme among the people. The approach of the programme that has emphasis on bringing down the birth rate, importance to communication, education, motivation and voluntary acceptance has been considerably underplayed.

The programme has to be essentially for fertility regulation and to be integrated with the programmes of health, maternity and child welfare. Since spacing and limitations of births are essential components of the MCH, population control will be a natural outcome. Further research is needed in two directions: investigation into factors which go towards creating a strong motivation for a small family size and spacing and limitation of births. Family planning programmes have meanwhile to proceed within the limitations imposed by the prevailing socio-

economic and cultural conditions. No short-cuts or gimmicks like national or patriotic appeals of a frightening population explosion will be of much help (Kamat 1971). This should be obvious since the main motivation for a behaviour comes from individual interests than general welfare of a distant and promised future.

Banerji (1972) discusses major changes in the approach to family planning, starting from clinic to extension education and then a target-oriented, time-bound approach. He points out that performance of the programme has been grossly inadequate for achieving the prescribed objectives under all the government accepted approaches. In his opinion, the programme formulators have made a fundamental mistake in overlooking the fact that certain social and economic factors make the key contributions to the generation of motivation for the small family norm. The planners are simplistic in expecting that pressure of revenue staff and lure of incentives of mass vasectomy camps will provide the solution.

Despite the enormous investment, despite all the good will of planners and political leaders, and despite taking recourse to means which are questionable on social, moral and political grounds, even in terms of reduction in birth rate, the family planning programme has never reached anywhere near the objectives. Banerji (1974) opines that the decision-makers made a fundamental mistake in taking a very narrow view of the problem of rapidly rising population growth in India.

With the failure of the programme in achieving the targets, the idea of compulsory sterilization took root and this development can be traced back to July 1967 when the chief ministers of the states at a meeting in New Delhi discussed the family planning programme. Drastic measures to control population growth were discussed. Maharashtra specifically recommended legal and Constitutional steps for sterilization. However, the Small Family Norm Committee, 1968, dissuaded the use of coercion. Again at the January 1976 Congress Session, the Prime Minister mentioned the need for strong steps. The population policy of April 1976 gave freedom to the states to plan and implement the programme. The Punjab Government passed the bill providing fines and imprisonment for couples with more than two children unless sterilization was accepted. Maharashtra pursued this subject with zeal in March 1976 (Singh 1977). The State attempted to introduce a bill on compulsory sterilization of couples with two children.

The editor of *The Economic and Political Weekly* wrote in 1977 that though Indira Gandhi had reported in several election meetings that the Government has never advocated compulsion in family planning, a

number of measures taken at that time clearly showed compulsion. For example, on a number of occasions, between July and December of 1976, the Prime Minister had stated that the adoption of harsh methods was inevitable if the family planning programme was to succeed. One after the other, the State Governments adopted direct and indirect methods of compulsion to enforce family planning targets. The Union Government itself had established a rule under which disciplinary measures were to be taken against those public servants who produced children beyond the stipulated number. The State Governments set targets to be fulfilled by members of the medical service, primary school teachers and other government personnel. Each such employee was expected to bring every month a certain number of individuals for vasectomy and tubectomy, failing which their salaries would be withheld and regular increments stopped. In one or two states, steps were also initiated to deny medical facilities, including obstetric services to women, with more than a specified number of children.

During 1975-1977, the period of emergency rule, India's political leadership made family planning one of its highest priorities. The results of its efforts included over 8 million reported sterilizations that resulted in several hundred deaths, the harassment of millions, the collapse of the family planning programme and the disgrace of the leaders who were responsible for the excesses. Top level political commitment, the Indian experience indicates, is no automatic solution to the difficulties of implementing the family planning programme. Inadequately constrained, political will applied to family planning can create problems as serious as those it is meant to solve (Gwatkin 1979).

With target approach, another misconception about the family planning is its strong association in the minds of the masses with sterilization. In an anxiety to get results and to control the birth rate, unrealistic targets were fixed. From 1962 onwards, the Government introduced incentives for acceptors. Financial incentives were offered even to clinic staff on the number of acceptors they served. Motivators were given motivational charges. The promotional measures continue and the amounts paid are higher today than when they were introduced. To fulfil the targets and to earn incentives, many abuses have entered the programme. The quality of programme became poor, many ineligible couples were sterilized. Costs and corruption increased. Most of the achievements of the camp approach were due to "coercive persuasion".

An evaluation of a vasectomy camp in Gujarat brought out that thirty-nine percent of the men sterilised included (1) men whose wives had attained menopause (18.9%); (2) those who were secondarily

sterile and therefore, not using any family planning methods (12.4%); (3) those who were either unmarried or separated or widowed (3.8%), (4) men whose wives were in the age group 45 and over (2.1%) in whose case no pregnancies could occur or reproductive performance could be very low; (5) cases were reported where either of the spouse had been sterilized earlier (1.8%). This shows the low quality of cases which were operated in the mass vasectomy camp (Gandotra 1975).

Several studies have drawn attention to the fact that given the target-orientation of the entire programme, the data on achievements were quite unreliable. The recently released report of the Comptroller and Auditor-General of India for 1983-1984 for Maharashtra substantiates these findings. In its evaluation of the State programme, the report highlights some glaring problems. These relate to the achievements of the programme as well as to staff training, follow-ups, etc. For instance, the data on IUD failures, through either expulsion or removal of the device for any reason, are significant. Only 81 per cent of the cases (in some PHCs as few as 35 per cent) were followed up and of these the failures were 31 per cent. Thus, the total effective acceptors for IUDs were considerably fewer than recorded. The 10 per cent complications which led to the removal of the device offer a clue to the effect of the family planning programme on women's health.

The report has also drawn attention to the large number of ineligible couples in 19 districts and 5 corporations who are acceptors. Thirty-one per cent of the couples were 'ineligible' because they did not satisfy the criterion of one or two children. Moreover, the report also notes that since the eligible couples register is not used as a reference when recording acceptors, there is no way that ineligible acceptors can be identified and followed up. In a test check, the CAG has come across two ineligible cases of tubectomies on women whose spouses had already been sterilized. Similarly, there was no user-wise record for conventional contraceptives and oral pill users which means that there was no way of knowing whether the distributed contraceptives were being used at all, or for that matter, whether there were complications arising out of the use of pills (*The Economic and Political Weekly* 1988: 1449).

The programme today continues to work under pressures. The pressure of camp organisers and application of personal influence is used to motivate the couple who are attracted by incentives. These work more effectively when there is no employment available and during the lean agricultural seasons in rural areas. It is significant that the Government observes a family planning month during such lean periods and records show that most of the achievements of the programme

are during these months in contrast to the even spread of the achievements throughout the year. The report of the Comptroller and Auditor-General of India for 1983-1984 for Maharashtra notes that in the four years ending 1983-1984, between 23 and 37 per cent of all IUD insertions were carried out in the last month of the financial year, March. In one sub-centre of a Pune District PHC, 84 percent of the insertions recorded between January and March 1984 were either removed or expelled. The State Government has provided no explanation for this strange rush for IUDs in these months, nor for the fact that such a large proportion were failures (*The Economic and Political Weekly* 1988: 1449).

The introduction of monetary incentives has commercialised the population control programme and in fact, come in the way of the success of the programme. The monetary incentive is offered mainly for sterilization, though there is a small incentive for the IUD method. So the whole programme gets geared to the adoption of sterilization. It does appear that the real motive on the part of the rural masses is to get some money, coupled with gifts in kind. Some states give additional monetary incentives. Thus the people tend to view the programme as a one-shot, mini anti-poverty programme, rather than a genuine population control programme (Ashish Bose 1988).

Most of the achievements of the programme are through the one-time motivation methods such as sterilization and IUD. This is an indication of the approach that originates from the programme staff than from the motivation of the couples. Besides the above-mentioned approach of exploiting the economic situation of the poor, another observation is that of large numbers of women who go for abortion (MTP) are sterilized since it is easy to get such women to go through the operation.

The official statement points out that: "The long-term goal is to reach Net Reproduction Rate of Unity (NRRU) by 2000 AD with a birth rate of 21, death rate of 9, infant mortality rate of below 60 per thousand live birth and couple protection rate of 60 per cent" (Government of India 1988: 10).

To achieve the targets, the steps advised to "improve performance" include one-day weekly camps at the sub-centre level for IUD insertions and special drives for spacing methods and intensive activities under the programme (Government of India 1988:10).

What needs to be realised is that a Primary Health Centre (PHC) covers a population of about 30,000 and each PHC has 5 to 6 sub-centres. From the experience so far, one can well imagine the conse-

quences of an advice of "weekly camps" for IUDs for sub-centres. It should be added here that on an average, there are 169 married couples per 1000 population as of 1981 (Government of India 1988:68). Of these there are those who are sterilized. And these advices for "weekly camps" and promotion of spacing methods are given in the face of findings of various studies reported by the Government itself. It is said that "various studies conducted through private and other organisations have highlighted that the existing infrastructure is not being optimally utilised mainly because of its inadequacies. The major inadequacies relate to poor quality of services, non-availability of staff, lack of empathy of staff and poor management" (Government of India 1988:348).

Another female method that is now being promoted is the "Pill". While the pill may be good as a spacing method, it is amply documented that it cannot be distributed without a medical checkup and sorting out cases with contra-indications. Also there is enough research done on the effect of the pill on lactation. This also needs to be seriously considered before mass promotion of "Mala" (the brand name of the pill) through media such as TV and newspaper advertising. Also, distribution must be accompanied by a close follow-up of sufficient number of cases so as to be able to guide the programme.

In its anxiety to control population and to bring younger couples under the programme, the Government has introduced methods such as Depo-Provera, Net-Oen etc. Women's organisations have launched an agitation against these methods on the grounds that these methods are banned in the developed countries since clinical researches have proved that they have side-effects.

The World Health Organisation (WHO) and the Indian Council of Medical Research (ICMR) also report side-effects but they support the promotion of these methods on the ground that in the face of high maternal mortality, as experienced by the Indian women, any method that prevents pregnancy is far more effective, even in the face of "some" side-effects.

Against the target approach, many argue that for any population policy to be meaningful and successful, it must consider not only the macro implications of rapid population growth which are by now well known, but should also focus on the micro effects of such growth. A population policy will appeal to the masses only when it modifies the factors that adversely affect an individual family. The most important factor for a couple for accepting fertility regulation is that they should have proved their fertility by giving birth to one or two children. Women

are forced to have children soon after marriage because under the prevailing cultural context, their husbands would be ridiculed and criticised by the society and called impotent if they do not have a child. Barrenness is considered a curse, and social stigma attached to barrenness results in degradation of status of men and women. When mothers are generally awarded much higher social status than childless women, there will be no attempt to regulate fertility immediately after marriage. In some communities, parents of the girl do not drink water or eat food in a married daughter's house till she begets the first child. The reasoning behind this behaviour is that parents are obliged to give a daughter who will bear sons to the family of her marriage. Till this obligation is fulfilled, the parents owe a debt and cannot partake of anything that belongs to the daughter's marital home. All these customs force the couple to go for the first child immediately after marriage. When marriage and child bearing are the only conditions that bestow status on women they are bound to have an effect on the women's behaviour. Unless society assigns status to women on their achievement in other areas concerning their lives, fertility regulation will never be a societal norm.

The dominant desire for a male child for ensuring the continuation of the family line still affects the family size. More sons are desired for a number of socio-economic reasons. The 28th round of NSS was conducted to collect data on family planning with a view to examine the differentials in practice. In rural and urban areas of the country, the practice of family planning among young couples having one or more sons is much higher than among young couples having no surviving sons but having one or more daughters.

"There is an important sociological angle of the population control programme. All over rural India, there is a marked preference for sons and our rural masses start thinking of limiting family size only after they have two living sons. This phenomenon of son preference is the product of diverse factors — physical, economic, sociological, religious, etc. It would be simplistic to write it off as a mere superstition. It is a deep-rooted phenomenon and I would call it demographic fundamentalism" (Ashish Bose 1988: 7).

A major role in popularising amniocentesis followed by female foeticide is played by the medical scientists who popularised these techniques. The medical profession which works for personal satisfaction in technological achievements forgets that their work cannot be value free. It is a known fact that, culturally, Indians are biased towards a male child. Amniocentesis provides knowledge of the sex of the child thereby encouraging female foeticide.

High fertility is argued to be a necessary biological and behavioural response to high mortality. This assumption is manifested in the theory of the demographic transition which in its simplest form states that mortality decline is followed by fertility decline. In the child replacement hypothesis, it is argued that parents try and replace the children who die. It states that the couples aim to produce enough children to ensure the survival of some intended number to adulthood. It is, therefore, argued that couples will not reduce their fertility until they are convinced that the infant mortality levels have dropped (Taylor, Newman and Kelly 1976, Preston 1978, Omran 1971).

In India, large families are preferred for reasons which are basically connected with poverty, illiteracy and inadequate public health and medical care. Children, especially sons, are still widely considered a form of wealth and as a hedge against old age. In any case, with mortality rates still very high in India, couples prefer to have more children, expecting a few to die in childbirth or later from disease. In Bihar, for instance, the infant mortality rate is an appalling 160 per 1000 births, compared to 43 in Sri Lanka and just 7 in Japan (*The Indian Express* 10-7-1986).

Scrimshaw (1978) points out that another factor in the fertility-mortality equation is seldom mentioned. This is the idea that mortality may sometimes be a response to high fertility instead of a stimulus to it. While the biological effects of high fertility or mortality — the effects of close spacing of births and related factors have been recognised, there may also be a behavioural response to fertility that results in increased mortality. In some societies, infant mortality may be an unconscious or an overt way of attaining a given family size. Where this occurs health officials may be puzzled at the under-utilization of family planning services as well. Population scientists have, on the whole, overlooked one of many factors contributing to behaviour related to infant mortality. Parents will not always go to extremes to save the life of a child and may in fact invest more time, attention and resources in some children than in others. Children who are relatively unwanted, even subconsciously, have a lower probability of surviving. Higher mortality among females in India through neglect and discriminatory treatment is well known. Malakar (1979) from his analysis of Sample Registration System (SRS) data in India shows that female mortality is higher among larger families.

That family planning programme is ill-directed and is counter-productive is so apparent that even the Government publications show that awareness. Attitudes supporting early marriage, early first pregnancy and short birth intervals are still common. Knowledge and use of

contraceptive methods for child spacing are uncommon. Many couples know very little about the contraceptive methods that can be used for spacing children. Knowledge of such methods as the I.U.D. or pill was very low in almost all areas and most respondent groups. There are some indications of apparent ineffectiveness of past communication efforts. While the idea of a smaller family size and of the use of contraception for terminating childbearing appear to have gained ascendancy, knowledge of child spacing and proper health care of young children have not been effectively communicated (Ministry of Health & Family Welfare, 1985).

Another important government-supported organisation, the Indian Council of Medical Research (ICMR), also shows awareness of the conditions underlying the poor acceptance of the family planning programme in India. However, even the ICMR shows the widely observed female orientation towards the responsibility of the family. Bose (1988) observes that a series of exercises, both at the conceptual and field levels, were initiated by the Indian Council of Medical Research (ICMR) to generate new ideas to make the population control programme truly effective. It was clearly recognised that the present strategy was centred around the terminal method of sterilization and the available data showed that by and large, women were coming forward for sterilization towards the fag end of their reproductive life and no wonder, the expected dent on the birth rate was not there. The focus of ICMR's new approach is on the education of the younger generation and in particular, on girls in the age group 9 to 19 years in the hope that the new generation will adopt the small family norm when the time comes. However, this strategy may not succeed if the men are excluded from the programme. They must also understand and value the concept of responsible parenthood.

The motivational family planning campaign in India has been geared a great deal to the theme of family size. As is candidly proved by the UPASI report, the concept of welfare is very comprehensive and is basically related to quality of life. It should be used as a means to planning for better quality of children. Contraception should not be projected as an end in itself as is done by the programme that has reduction in the population size as an objective.

It is the change in the emphasis on marriage and childbearing as sole causes for women's existence that will reduce the family size. Given the options to use means to have the desired number of children will then control the population size on the basis of human rights rather than on demographic grounds. This was accepted at the Bucharest

Conference where it was resolved that every couple should have the right to decide the size of the family that the couple wants and it should also have an easy access to means of regulating fertility (Bucharest 1974). Pressures to limit the family size to two or even three negate the innate right of the couple to decide the size it desires. Similarly, heavy pressures to promote terminal methods that are helpful in increasing averted birth rates also make free access to choosing methods by the couple more difficult.

It must be clearly recognised that the limits to state intervention in changing the deep-rooted attitude towards the female child, the cause of female neglect from conception to death, calls for social transformation of a high order. The rural masses will be with the government if state intervention is reflected in an efficient system of health delivery at the grassroots level and an effective functioning of the numerous anti-poverty programmes. There can be no better strategy than human resource development, centred round nutrition, care of mothers and children, concern for the girl child, improvement in the level of literacy, skill development, income generation, physical and emotional security and respect for human values. If the argument is that all this will take time and meanwhile, the population will grow, experience with the programme only points out that population stabilisation will take even more time in the absence of a positive approach. Population control without development, even if it is attained, will generate misery and political instability. Let us not look for short-cuts. They do not work (Ashish Bose 1988).

Women's access to educational, socio-economic, political and employment opportunities can bring better results in population control. They should be given a status on par with men in family and in society. The women's movement demands that family planning should form an essential component of any broad-based development strategy that seeks to improve their quality of life without violating their dignity and human rights.

"If health care for all is to be achieved by the year 2000, then women must share equally with men the responsibilities, the key decision-making positions and the services. Allowing widespread poor maternal health and nutrition to continue will have serious repercussions on future generations, on societal behaviour and on national policies. Clearly, the solution requires a political approach at the highest government levels with women participating in the establishment of priorities and implementing programmes" (WIPHN NEWS 1987).

Review of Population Research in India

There seems to be consensus that the demographic knowledge generated in India in terms of data and research has been grossly insufficient for any meaningful interdisciplinary explorations, in general, and for the study of population and development interactions, in particular. As a result, it has been neither academically enlightening nor practically useful. This rather harsh, yet valid, assessment has been confirmed by many evaluative studies undertaken by reputed scholars and specially commissioned study groups. For example, the report of the International Review Group in Research on Population (1980) after evaluating demographic research in India, came to the following conclusion: "... Population research has remained at a rather low level of development, with very little if any, theoretical sophistication. Considering that India has had a well-defined population policy since 1952 and that basic data have been more plentiful than other developing nations, research has lagged well behind the demands posed to population scholars by social, economic and political events". Bernard Berelson (1978), in a review of the current state of knowledge on the determinants of fertility in IDC, comes to the following conclusion: "There is no solid and sustained scientific consensus on specific answers to the questions posed under policy issue 2 (viz. basic determinants of fertility on the thresholds for fertility reduction). As for the effect of broad developmental factors on fertility in such countries, there is agreement on a few broad propositions. But there is much less agreement or none on why and how such relationships obtain."

Thus we find that the demographers have failed to explain the inter-relationships (in terms of the dynamic processes of work) between the demographic parameters such as fertility, on the one hand, and the psychological, social, cultural and ethical parameters, on the other. The point is that there was concentration on quantitative aspects of the population. Efforts were mainly directed towards obtaining birth and death rates. However, information and data generated in India were grossly inadequate to throw light on the status and dynamics of the demographic and social interactions in their widest sense. As a result, the policy-makers perhaps did not find population-related knowledge produced in the various research institutions sufficient enough to evolve a population policy as an integral part of the overall strategy of social transformation. This explains why population policy in India became coterminous with no more than family planning and sterilization and also suffered from the ailment of targetitis (Pethe 1988:1-4).

Much of the information that is helpful in understanding the deficiencies available has become available only in the recent years. It is being

generated through Women Studies. There is urgent need to broaden the work done in these areas. Another group that has brought out the ill-effects on the quality of life of population are the environmentalists. Their work is bringing forth the widely neglected environmental situation and their impact on human resources. Now that we have a Ministry on Human Resources, it is essential that an approach that will consolidate the learnings from various disciplines are applied to the work in the community and not much time is wasted in high sounding research that generates nothing but large data.

"Behaviour about contraception is a complex phenomenon which cannot be studied with the application of any one discipline alone. In developing countries and culturally diverse countries like India, social and cultural factors have an edge over other factors in determining contraceptive behaviour. Therefore, the role of social scientists such as sociologists and anthropologists etc., is very important in identifying the problems involved in non-contraception, factors involved in drop-outs of adopters and in evolving effective strategies for promoting birth control programmes, besides evaluating the behavioural dimensions of the family planning programme" (K.Mahadevan 1982:336-37).

Since the inception of the National Family Planning Programme, research has mostly remained in government-aided centres and has had a strong bias of statistics-oriented demography, on the one hand, which kept evaluating the programme from the point of impact on birth rate, births prevented and effects on fertility indices; on the other hand, the bio-medical sciences kept themselves busy looking for safety and efficacy of contraceptives (Karkal 1984).

Reviewing the work on behavioural aspects of family planning in India, carried out till 1972, Pareek and Rao (1974) observed that (1) the major trend in researches was a heavy concentration on knowledge, attitude and acceptance studies and such studies were duplicated even when no new findings were arrived at, (2) personality, motivation and value aspects of acceptance of family planning had not attracted the attention of investigators, (3) studies in urban areas were as many in number as those in rural areas even when the populations living in rural areas was four times those in urban areas, (4) the data were not subjected to rigorous statistical analysis, (5) very few studies had been conducted in the area of family structure orientation, child-rearing practices and similar factors and (6) sizable amount of researches on different areas of communication and particularly mass media campaigns etc., were conducted. However, the trend was to survey the public opinion regarding the use of such media rather than to undertake impact studies. Most of the studies on different contraceptive devices

seemed to be follow-up studies but perception and acceptance studies were not conducted. Follow-up studies on sterilization and contraceptives assessed the after-effects in terms of medical complaints rather than psychological changes and the extent of satisfaction with the methods.

According to Mahadevan (1982:337), a few of the major research themes implemented so far were: (1) Knowledge, Attitude and Practice (KAP) studies, (2) characteristics of various adopters and non-adopters, (3) evaluative studies, (4) role and importance of change agents, (5) innovation and diffusion, (6) communication, (7) decision-making process, (8) studies on job functions of workers, (9) marketing of contraceptives, (10) abortion studies, (11) methodological studies and so on. Among these studies, the single largest number of studies was on KAP.

The KAP studies, however, were subjected to severe criticism in India and abroad. Most of them were repetitive in nature and not exhaustive in their coverage. Their policy relevance was seldom made explicit in most studies. For instance, various aspects of knowledge, attitude and practice related to specific methods, both traditional and modern, temporary and permanent, service centers, service personnel, relative acceptability, incentives, communication channels and process, follow-up service etc., could not be considered in the past and deserve proper treatment in future studies. On these lines, if KAP studies could be carried out in a comprehensive manner, there could still be scope and relevance for such studies in this programme as an intermediate behavioural index of programme implementation.

Pareek and Rao (1974) pointed out that adoption of family planning methods by individuals is influenced by factors at the levels of individuals, the family and society. The process of the use of methods of fertility control by an individual can, therefore, be understood by considering factors at the individual level, that is, personal variables such as level of motivation, personality factors, values, educational level, socio-economic status level, caste and/or religion, sex, age and occupation. These variables influenced values and attitudes.

The factors operating at family level are: the type of family structure and orientation of the family to modernisation and other social values, relationship between husband and wife, communication between them, practice of rearing children, number and sex of children and socio-economic status of the family.

At the societal level, the prevalent customs and beliefs, social structure, role of formal and non-formal leaders, urban or rural resi-

dence, the class and membership of special groups also influence the behaviour in family planning.

Other authors, including those who studied the work done in later years, have come to the conclusion that coverage of the subject area relevant to the field of behaviour in family planning has been very much lopsided. The studies have been methodologically weak and conceptually poor (Bogue 1965; Banerjee 1979; Kamala Rao 1981; Rao and Pareek 1981). According to Mahadevan (1982) many relevant socio-cultural variables could not be identified by the researchers because of the non-involvement of suitable social scientists in research and the programme, and above all, lack of innovativeness and non-flexibility in rules, approaches and behaviour.

The studies on acceptance of family planning methods and of regulation of fertility have invariably been concentrated on describing the socio-economic and demographic characteristics of the acceptors. The first and second ORG surveys provide information on socio-economic and demographic characteristics of acceptors of family planning (ORG 1971; Khan and Prasad 1982).

Analysing data at district level from 1969 to 1976, Jolly (1978) concludes that socio-economic development improves acceptance. Some of the other studies were based on samples in specific geographic areas. V. Reddy (1984) examined the demographic characteristics of 600 adopters of sterilization and indicated that people of higher economic status generally adopted sterilization at earlier ages and after fewer living children, fewer sons and with experiences of the least number of infant or child deaths as compared to those of lower economic status. The two groups selected for comparison were the Kammas and Harijans. A study of 140 women in a rural community of Punjab found that among the users of family planning methods, the actual family size was smaller among moderately modern as compared to traditional respondents (Singh 1982).

The average number of living children was more (3.69) for adopters than non-adopters (2.96). Higher castes had adopted family planning more than the lower castes. Both adopters and non-adopters have preferred sons to daughters (Chandra Mouli & Mouli 1981). Similar results were obtained when data were collected from Nasik district in 1970 and in a repeat survey of the villages in 1980 (Karkal and others 1985). In a study in Andhra Pradesh, the researchers have examined the changes over a period of 12 years from 1967-1968 to 1978-1979 among vasectomy and tubectomy acceptors and found that the family planning programme has started reaching younger men and women

with less number of living children over a period of time (Rajeswari & Jorapur 1983).

Some of the other studies, based on samples in specific geographic areas, provide information on socio-economic and demographic characteristics of acceptors of family planning (Kohli & Goel 1974; Shaktawat et al 1974; Saksena 1974; Gandotra 1975; Kanitkar 1975; Bhende 1975; Kohli et al 1976; Chaturvedi et al 1977; Henley and Jain 1977; Shastri 1977; Divekar et al 1978; Sawhney et al 1978; Goyal 1979; Krishnamurthi and Manu 1979; Akhand and Saxsena 1979; Gupta et al 1979; Srivastava 1979; Seth et al 1979; Jamshedji and Pachuri 1980; Gopalkrishnan 1981; Mohan et al 1981).

There are many studies conducted on acceptors of Medical Termination of Pregnancy (MTP). Krishnamurthi (1979) evaluated 937 MTP cases performed at the post-partum centre, KMC hospital, Hubli, since the inception of the MTP programme on 1st April 1972 up to 31st March 1978 and found that the monthly average of MTPs registered a six-fold increase during the study period. Four-fifths of the women were married and the rest were either widowed or divorced. The proportion of literate acceptors was higher than that of illiterate acceptors. The number of acceptors in the first and the second trimesters of pregnancy were evenly distributed. According to another study, medical factors such as age, health of the patient and parity exercised predominant influence for the decision to terminate pregnancy. The study finds that literacy has little effect on the acceptance of MTP (Chaurasia & Pattankar 1980). More than one-fourth (29.6%) of 1,684 MTP acceptors in other study were women below the age of 20. Of these as many as 300, including 93 first trimester MTPs and 207 second trimester MTP seekers, were unmarried teenagers from secondary schools or illiterate girls from the lower socio-economic section of rural areas and slums (Solapurkar & Sangam 1985). Illegitimate pregnancy was higher among rural females (Yadava et al 1979).

There is evidence that a large number of abortions are still done outside the law. Such abortions are not covered by surveys and not much is known as to why women prefer to take recourse to the services outside the officially accepted centres, especially when it is known that the risks to their health are higher. "Although Medical Termination of Pregnancy (MTP) has been legal since 1972, the number of illegal abortions continues to be high and so also the number of deaths due to septic abortions. In April 1985, the Minister of State for Health told Parliament that 4.35 lakh cases of MTP were reported in 1983-1984. Official sources have no precise data on illegal abortions and conse-

quent deaths. The Parivar Seva Samastha which runs the Marie Stopes Clinics says that about 6.6 lakh women die every year because of illegal abortion" (*The Times of India* 2-6-1984).

Abortion is the principal means of birth control worldwide but women in poorer countries have virtually no safe access to the surgical procedure, according to a population control group. Of the 28 million abortions performed yearly in developing countries, an estimated 20 million are illegal and most likely unsafe. Even in countries where abortion has been legalized — as in India only one million out of the 5 million or 6 million abortions performed are safe. Unsafe or illegal abortions result in 1,00,000 maternal deaths a year worldwide. An exact figure is difficult to estimate because many abortion-related deaths are not reported as such (*The Statesman* 29-12-87). All these studies are based on a small regional sample. The socio-economic characteristics vary even among districts of the same region as well as between different regions. All-India data may give some idea of the demographic characteristics of the acceptors. Similarly, no definite conclusions can be drawn about acceptance of family planning over time. As pointed out by Pareek and Rao (1974) in their review of earlier researches, the emphasis in these studies was on follow-up surveys giving demographic and socio-economic characteristics of the acceptors of the methods. Majority of the studies were for the acceptors of sterilisation and IUD because of the large number of acceptors for these methods.

Among the studies of acceptors of vasectomy, efforts were made to study the sexual behaviour after vasectomy (Karkal 1975; Nair 1976).

Unsatisfactory experience with methods of fertility regulation, coupled with inadequate knowledge, was shown to cause fears and anxieties among the target populations. Impact of such programme was specially disastrous when motivation for small family was strong (Karkal et al 1978). Either because of lack of communication between the health workers and population or because of inadequate knowledge of the health service providers, people who adopt family planning methods are not properly informed. The vasectomy acceptors did not receive any information on the nature of the operation, the procedure, possible side-effects or post-operative care (Saksena 1974).

Joyce Pettigrew (1984) reports a case study of the unintended repercussions of one woman's tubectomy operation on her family. In the village in Punjab, where the author worked, women reported experiencing pain in the pelvic area and lower back region after the operation. This affected their capacity to work and thereby relationship within the family, to their children and to their husbands.

The author points out that in the rural and agricultural setting, the tasks assigned to women involve a great deal of bending and stretching. In addition, shortage of water and the work that requires them to handle mud and cow-dung exposes the women to infections. The post-operative condition, therefore, may be aggravated by the work conditions of the women. Pettigrew also records the indifference of the staff in attending to complaints of such cases.

The report of the Comptroller and Auditor-General of India for 1983-1984 for Maharashtra found the State Government guilty of ignoring the Government of India guidelines specifying that laparoscopic sterilizations should be conducted only in well-equipped hospitals and not in camps. In Maharashtra, 94 percent of laparoscopic tubectomies had been conducted in camps. Even worse, in several centres, the operations had grossly violated State Government norms which lay down that not more than 50 operations should be conducted in one day with only one surgeon and one laparoscope (*The Economic and Political Weekly* 1988:1450).

Villagers had an exaggerated view of the problems associated with various contraceptive methods. Vasectomy was often believed to be the cause of death, a serious illness. They were ignorant of its true nature. In the villages of U.P., the slang term for vasectomy is 'Bhadiya', which means castration. There was a fear that vasectomy could cause impotency and some of them even said that the villagers ridiculed vasectomy acceptors. Some villagers felt that death may result from contraception which prevented them from adopting family planning (Misra et al 1977).

There has been a consistent increase in MTP associated sterilizations as against post-partum sterilization alone (Sati & Mishra 1983). The complications rate of 38.9 percent was found after MTP. The rate includes both major and minor complications followed by vaginal discharge or backache. Except haemorrhage, the type of complications observed in this study was mild probably due to the use of prophylactic antibiotics in all cases. Worry was the main psychological reaction observed 12 weeks after the abortion, followed by guilt feelings and a feeling of relief (Somasundaram & Mehta 1984).

The IUCD programme in India during 1965-1967 could not stop people from getting panicky. People were not informed about the side-effects and there was no follow-up. This gave a terrible setback to the programme (Dandekar & Nikam 1971).

The Estimates Committee (1971-1972), Family Planning Programme, reported the observation that the decline was partly due to

shortcoming in pre-insertion scrutiny and counselling, faulty insertion procedure and inadequate detection and treatment of side-effects. These lapses were discouraging users and scaring many of the future acceptors (quoted by Gulati 1979).

Women were afraid of side-effects such as pain, nausea, giddiness due to the pill, too much bleeding and expulsion due to loop, which they had heard of from friends. Many women stated lack of adequate information about contraceptives (Karkal et al 1978).

Kakar (1984) presents case studies of women and their experiences with contraception and the services they obtained in the Government-managed sectors. He points out that women suffering from bleeding after an IUD insertion are discouraged from removing the device, stating that it is the 'habit' of women to come with complaints on one pretext or the other and ask for the removal of the contraceptive. The attitude of indifference and callousness exhibited by the health staff discourages women from approaching them for help. Balasubrahmanyan (1986) lists cases after cases which indicate the attitude that is generally observed in the staff of the health services. She points out that the nurse-in-charge is reported as saying that the women are illiterate and the complaints they make are psychological. The clinic staff is known to push its own decisions in what the women should accept. The women are advised methods of spacing, especially if they have two or more children. Well-to-do and educated women also report similar treatment at the hands of medical staff, thus indicating that the clinic staff operating within our patriarchal system imbibe these attitudes and reinforce such values and beliefs of the society which are oppressive to women. They lack sympathy for women and condemn them as unintelligent beings.

Some studies have focussed on identifying certain socio-economic variables to explain inter-state or inter-district differences in contraceptive acceptance in India. Urbanization, female literacy, per capita income and population size were factors responsible for a substantial part of inter-state variation in contraceptive acceptance in India. Nair (1982) and Bhattacharjee (1984) concluded that family planning achievement is not necessarily linked with development and a reasonable level of performance can be achieved without any change in socio-economic conditions. According to Das (1973) and also Misra (1973), States which are doing well in family planning are also comparatively better developed in economic and social spheres.

Some researchers have studied the attitudes of the currently married couples towards family planning and related them to socio-

economic and demographic variables. A highly significant relationship between family structure and husband-wife communication was brought out. The extent of use of family planning methods was also found to be higher among nuclear families, irrespective of the place of residence (Gandotra and Pandey 1982). According to a study, family planning practices seem to be significantly correlated with both literacy levels and age at marriage of women (Benjamin 1981). Income was directly related to favourable attitudes to family planning, irrespective of caste. People following non-traditional occupations have a more favourable attitude towards accepting family planning. Education has a tremendous influence in promoting favourable attitude to family planning. Female age at marriage was directly related to favourable attitudes only among forward castes (Reddy M. et al 1984). There is a definite increase in the practice of contraception in urban areas with increasing literacy rates. Rural couples had adopted a permanent method more than spacing methods whereas among urban couples there was a definite tendency towards accepting spacing methods (Deshpande & Bharani, 1980). The socially and economically advanced people had better awareness of family planning. Education and literacy are important factors in determining attitude to family planning. Modern couples favoured family planning, irrespective of their religion (Nambiar 1966).

Nag (1976) presented the experience of the sterilization programme in India in its various dimensions. Among the aspects covered were the sex ratio of sterilization, variation by states, characteristics of acceptors, complications including effect on libido, desire for reversal, use effectiveness, motivation and effect of incentives on acceptance of sterilization. Two studies, namely, one by Mukhi (1979) and another by Gandotra and Pandey (1979), investigated into the basic values such as influence of family in the development of child and its relationship to family size and value of children and its influence on the decision of family size.

As early as 1969, Gould (1969) observed that if a programme like family planning is to succeed, cultural factors will have to be more fully taken into consideration at the planning level. The only effective communication at the rural level is personal communication. In some areas, people do not even understand Hindi words such as "Parivar Niyojan". But they do understand a simple sentence like "Bachha Bandh Karne Vali Davai". They also know that no family planning worker has visited their village in the past six months, although the community development headquarters is less than two miles away. Besides, when workers come, they are like the clouds, here one second

and gone in the next. This is perhaps one of the most important reasons why family planning has not made much headway in the Indian villages.

The situation has not changed much even today. One of the Government personnel who is supposed to be in frequent contact with the population is the female health worker. Unfortunately, even this worker is not in contact with the majority of currently married women in some project districts. In Latur and Parbhani districts, Maharashtra and in Hamirpur district, Himachal Pradesh, for example, less than half of the currently married women had been contacted by female health workers (Ministry of Health and Family Welfare 1985).

Inter-spouse communication was stated as a better indicator of family planning practice than other background characteristics of the respondents and that the influence of this single variable was much stronger than the combined effect of all other background variables such as age, education, income, religion, occupation, rural urban residence, ideal and surviving number of children is brought out in a study (Bhatia & Neumanya 1980).

The level of family planning acceptance is higher when there is inter-spouse communication and inter-spouse communication is greater in households which are visited by field workers. Inter-spouse communication varied with age, number of living children, education and occupation (Chandra Mouli et al 1983). Besides inter-spouse communication, which is significantly related to favourable attitudes to family planning, among the various sources of information, satisfied adopters and peripheral workers decisively influenced the formation of positive attitudes to family planning, irrespective of caste. A significantly large proportion also developed unfavourable attitudes as a result of the influence of dissatisfied acceptors (Reddy M. & Muni Krishna 1983).

According to the Second All India Survey by ORG, two-thirds of the couples had no communication between them either on the number of children or on family planning. Seventy percent couples in rural areas and fifty percent in urban areas did not discuss family size or family planning. A comparison of survey results with that of the first ORG study in 1970 showed that communication had increased by 18 points. At the national level, in half the cases the husband took the final decision on the number of children the couple wished to have. In more than one-third cases the decision was jointly taken by the couple. In 9 percent the wishes of the elders were honoured (Khan & Prasad 1982).

Though the gap between ideal and actual family size is well recognised, few studies covering population at national level as an exponent of changes over time in attitude and behaviour indicating

changing levels of acceptance of family size and regulation of fertility are available. Information provided by the Ministry of Health and Family Welfare through its yearly publications of performance of the family welfare programme giving details on the characteristics of acceptors may give some idea of the changing situation. The survey data provided by the ORG at two points of time show that in 1970, 31 percent of the couples felt that 3 was a desired family size and those wanting more than 3 constituted 60 percent. About 12 years later, in 1982, the survey showed that these percentages had changed to 65 and 32 respectively indicating a definite decline in the desired family size (ORG 1971; Khan & Prasad 1982).

Use of birth control in China simulates that of developed countries, with 69.5 percent of married women of fertile ages having practised contraception. The most common method is the IUD, used by 50 percent, followed by tubal ligation (25 percent) and vasectomy (10 percent). In India, by contrast, only 23.7 percent of couples practised birth control in 1981-82, with sterilization accounting for 87.3 percent of these couples. The remaining contraceptive users were divided fairly evenly among IUD, pill and condom (Government of India 1983).

The ORG survey showed that while 81 percent of the currently married persons approved of family planning, only 35 percent of the eligible couples were practising it. Among the non-users, about 5 percent were past users and the remaining 60 percent had never used any method. A break-up of the current users revealed that majority of them (22.4 percent) had adopted sterilization, 4.4 percent condoms, 0.5 percent IUD and 0.8 percent pills. The remaining 7 percent were using the traditional methods, primarily rhythm.

A comparison of the profiles of current and never users indicate that, by and large, couples adopt family planning only after achieving their family size and desired sex composition (Khan and Prasad 1982).

The Planning Commission in its mid-term appraisal pointed out that according to available statistics, half the eligible couples in the country have three children or more. At present, the average number of living children is 3.7 for those who undergo sterilization. According to available statistics, the mean number of living children among IUD acceptors is 2.7 today (*The Times of India* 25-1-1988). Gossip, misinformation and rumours which are informal are of critical importance to the practice of family planning. The recent study "Evaluation of Media Reach and Effectiveness", commissioned by the Ministry of Health & Family Welfare, was jointly conducted by the National Institute of Health and Family Welfare, New Delhi and five other institutes, including the

International Institute for Population Studies, Bombay. It covered 14,000 people in seven states, i.e. Bihar, Gujarat, Karnataka, Maharashtra, Orissa, Tamil Nadu and Uttar Pradesh.

The study revealed that there has been an appreciable level of awareness among people about family planning, but the quality of this awareness was "discouraging and lopsided". A vast majority of the respondents (78 percent) said family planning programme was concerned with "small family, happy family". Only 33 percent related it with the use of family planning methods and still less (20 percent) said it had to do with "spacing of birth and control of population".

The study found that the communication strategy is biased in favour of the one-time permanent methods. Respondents' awareness regarding permanent methods were high — vasectomy 35 percent and tubectomy 45 percent compared to those knowing about the repeat use methods — condom 19 percent and oral pill 21 percent.

It was revealed that in the case of all other methods, except condoms, a large majority of the respondents need either more information or correct information for using various methods in order to eliminate ignorance and fear. A vast majority of respondents were either ambivalent or afraid of using the available methods with the exception of Nirodh. There exists considerable ignorance, misconceptions, fears and apprehensions about the different methods. The present communication exercise has not been able to remove them.

This study covered three media sectors — interpersonal channels (home visits and group meetings), traditional folk media channels (drama, puppet show, kirtan, tamasha etc.) and mass media (radio, T.V., newspapers, films, exhibition etc.)

Lack of proper dissemination of knowledge is one of the causes of failure of the family planning programme. Fear that contraception may harm pregnancies or cause birth defects have been disproved by large epidemiologic studies. Prospective studies among women using oral contraceptives or DMRA suggest that children conceived during or after the use of these contraceptives are at no greater risk of birth defects, low birth weight, spontaneous abortion or prematurity than children of women not using contraceptives. There is a need to remove this kind of fear that children die because of family planning. The second misconception is that hormonal contraceptives cause permanent infertility. But if proper use of oral pills with medical advice is made, then there is no problem. Women are not told that after the use of hormonal methods, there may be a delay of one to three months in ovulation but

after that, regular ovulation resumes. Most women who have used oral contraceptives conceive rapidly after this slight delay.

Similarly, pills introduced during lactation reduces breast milk and would have a negative impact as mothers might give up contraceptive practice altogether. Secondly, the synthetic sex steroids in the breast milk of women who are on hormonal contraceptives and the possible adverse effect on the infant is not known. So family planning programmes should take into account the special needs of breast feeding women in deciding the contraceptive methods among the women. Some women labour under the misconception that it is not possible to conceive while lactating.

Women should be informed of the side-effects of IUD. These are: late periods, no periods, abdominal pain, spotting, bleeding, heavy periods, clots. IUD users are more likely to develop pelvic inflammatory diseases (PID). They should know the early signs of PID and where to find medical help quickly. Use of IUD has no effect on children conceived after the device is removed. A woman who chooses the IUD must be told of the importance of having the device removed if she becomes pregnant, otherwise there are chances of complications.

Kakar's (1984) study has pointed out that the provision of balanced information and the freedom of choice were associated with a relatively higher rate of adoption and continuation of the IUD, the pill and the injection. Methodwise, a relatively high number of women adopted the IUD (60.4 percent). Effectiveness was mentioned as the most important attribute of the IUD, though some discontinued because of bleeding. What is needed most is an adequate follow-up by health workers during the first six months so that clients are helped in time to overcome side-effects and they continue to use the method.

There is a need to identify wrong rumours and their sources and to develop a programme to neutralize them. But for that there is a need to improve family planning communication as well as services. Health workers must have adequate knowledge of the clients and must try to understand their social, cultural and psychological backgrounds. Proper counselling should be given to new and continuing users. Interpersonal communication should be used to create favourable attitudes. The satisfied clients can be promoted as opinion leaders in the community. The greatest hurdles in family planning is fear of infertility, fear of injuries to health and sexual incapacitation and fear of death of children. The problem is a complex one. Unfortunately, the concept of family planning has been misconceived. Over-anxiety on the part of the Government to solve the population problem by distribution of family

planning methods and the neglect of the primary needs of the family makes family planning unacceptable.

Several suggestions have been made to improve the research work. Rao and Pareek (1981) suggested that anthropological approaches were needed. They should be focussed on small communities with intensive quality work for getting insights into the behavioural aspects of human values, attitudes and actions. They felt that findings of such studies may be supported by surveys with large samples and that surveys themselves do not provide information for planning programme for the changes in the regulation of fertility.

In spelling out the types of evaluation to be undertaken in the field of family planning, the United Nations (1978) states that the national family planning programme is a wide assortment of activities geared to an ultimate objective (of influencing fertility). Among the intermediate objectives mentioned are "efficiency of workers, periodic assessments of achievements of workers, recruitment of acceptors, programme logistics and yield from communication efforts. Among long-term objectives are mentioned items such as reduction of infant mortality and improvements in the general well being of mothers and children, reductions in induced abortions, a decline in fertility, or achievement of a specified rate of population growth".

Kamala Gopal Rao (1981) says "most family planning research emanates from institutions funded by the Department of Family Welfare and thus constitutes Government-funded research. Voluntary organisations and independent academic bodies have not done much in the field with the exception of Operation Research Group, Institutes of Management and Administrative Staff College. A few organisations like the Family Planning Association of India and Christian Medical Association of India have been engaged in micro studies as a part of their primarily service-oriented programme efforts".

In spite of the existence of a large number of very active departments of Sociology, Psychology, Anthropology, Economics etc. at the universities, there has been no manifest interest among these in the subject of family planning and as a result one observes whatever social science research that has been conducted in family planning, it lacks a strong tradition of socio-psychological research investigating into human behaviour and inter-relationships of individuals at individual as well as at group levels.

Not much attention has been given to the behavioural aspect of the family planning programme. At regular intervals the decisive role of psycho-social aspects was brought for discussion. However, it did not

receive follow-up action of investigation into behavioural components of the programme. Planners give a major part of their attention to action aspect of programme while often ignoring its effect on the target group. Since sexual behaviour and family building is expected to have its roots in socio-cultural background of individuals, it is not adequate to look into religious differential in fertility but researches need to be undertaken to know causative factors. Karkal (1984) points out that currently available acceptability studies of family planning methods do not provide any information on the behavioural change among the acceptors.

At a seminar organized in Tashkent in October 1983 by the ILO, it was stated that family planning programmes and population policies are often unsuccessful due to lack of understanding and knowledge of the social, economic and cultural factors determining fertility behaviour. It was suggested that the studies in future should throw light on these aspects and there should be better utilization of findings by policy-makers.

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5

SUMMARY AND CONCLUSIONS

The population situation in India is a matter of grave concern. The need for a drastic decline in the national birth rate cannot be over-emphasized. The Planning Commission in its mid-term appraisal of the Seventh Plan has noted that despite the increase in the couple protection rate, the birth rate does not seem to be coming down and is still around 2.1 per cent according to the Sample Registration Survey (SRS) data. Looking at the past performance, efforts to reduce the birth rate, which ultimately is the objective of various targets for contraceptives, seemed to have failed consistently.

The reason for non-adoption of family planning methods in rural areas particularly is the desire for more children. Recently, a large-scale survey covering some 32,000 respondents sponsored by the Ministry of Health & Family Welfare itself, has come to the conclusion that most couples want not only three or more children but they also want that two of them should be sons. The desire for more children could be due to socio-cultural and economic factors. With mortality rates still very high in India, couples prefer to have more children so that at least a few will survive. Who takes cognizance of the information revealed by the studies sponsored by the Government itself? Is there any accountability? What is being done to bridge the gap between knowledge and practice and why has it a very thin spread in the villages?

The time lag between awareness and acceptance of the programme, on the one hand, and its actual adoption on the other, is rather long. Obviously, there are various factors which prevent the adoption of the small family. More and more interdisciplinary team researches

are needed to find out the multivariate causes of family behaviour of people in India. The poor

The other two major reasons given by a substantial number of eligible couples covered by the Planning Commission Survey indicate both lack of knowledge and lack of faith in the available methods. Another factor was apprehension about the after-effects of vasectomy and tubectomy operations. It is a fact that even today, most families view family welfare measures with suspicion and hostility. This attitude seems justified when one perceives that in sterilization camps, the quality of work is sacrificed for number. No proper post-operative care is provided.

Another area where the authorities have slipped is providing information on the MTPA (Medical Termination of Pregnancy Act). Illegal abortions are still fairly common in rural areas with resultant impairment of health and fatalities among women. Only 4 per cent of the couples who practised contraception in rural areas were aware of the MTP facility.

What has the Government done in this direction? There should be regular camps in the villages where the eligible couples should be educated to link family planning with the quality of life issues and achieving better family life. Emphasis should be laid on dispelling doubts and fears about the methods of contraception. A package of messages relating to child survival, increasing the age at marriage, neutralising male preference syndrome, family welfare, women's status and other key areas of socio-economic development should be conveyed to them. Family planning has made better progress in big villages with better accessibility to medical care and health facilities and having better infrastructural facilities. This shows the necessity of making available health care facilities to all villages within bullock cart distances to make family planning a people's movement and community endeavour.

Does the new strategy of the Government reflect this attitude? The Government has redesigned the family welfare and population stabilisation programme with a time-bound action plan to bring about a swift decline in the birth rate from July 1986. The Government claims that the new strategy gives family planning the broadest dimensions of social engineering, including not only health and family welfare, but also child survival, women's status, employment, literacy and education. It also hopes to involve youth parliamentarians, voluntary agencies, trade unions and students in this drive. The thrust would be on a "two-child family" and the Government would give preference, under its economic

assistance scheme, only to those who have a small family. Again, the Government's policy is not based on its own survey findings. The rural poor, illiterate masses will not get economic assistance because they want more children so that at least two among them can survive and support them in their old age.

The major tasks under the new strategy during the next five years are:

- (i) 31 million sterilizations, 21.2 million IUD (intrauterine device) insertions and enroll 4.5 million conventional contraceptives (CC) and Oral Pill (OP) users.
- (ii) Attempt to reach higher targets by converting awareness and knowledge into acceptance through mass media.
- (iii) Immunize 82 million infants and 90 million mothers.
- (iv) Universalise (among 150 million households) the use of oral rehydration therapy.
- (v) Family life lessons for youth.
- (vi) Population education and one round of training for all personnel (about eight lakhs).

Will the new strategy — which appears to be mainly target-oriented — make its expected contribution to the welfare of the people? In what way is the Government planning to implement the law regarding the minimum age at marriage? Notwithstanding the publicity campaign launched recently on the TV, awareness on the legal implications of early marriage was nowhere near two-thirds even in urban areas. In fact, about 31 per cent of urban adults were in the dark on this aspect. Awareness among women was markedly lower, about 40 per cent (*The Times of India* 30-10-1987).

About 40 per cent of the couples are now effectively practising family planning. But the crude birth rate is estimated to be still about 33 per 1000 population per year. Why has there been no decline in the crude birth rate? Does it mean that the performance statistics are not proper? Does it raise the serious question of malpractices? Under the pressure of targets, institutions and workers are tempted to do double reporting to inflate the performance figures.

Very recently, the Rajasthan Government linked family planning with famine relief, assisting on a priority basis those who got operated. With a time-bound and target-oriented programme, family planning workers are forced to bring in a certain number of cases every month. This leads to some fudging of the programme statistics. Offering of

incentives has further increased the possibility of fudging. Bureaucratisation of the family planning programme is responsible for the poor performance. On the one hand, the programme was supposed to be entirely voluntary and yet its execution was in the hands of the bureaucracy. Bureaucrats generally fail to motivate people.

The Planning Commission in a preliminary paper on the Approach to Family Planning in the Eighth Plan (1990-1995) feels that demographic transition will not be secured merely by a revamped family planning programme. Fertility rates have started declining in many parts of the country, where, apart from family planning, substantial progress has been made towards female education and improved health status for women and children. The paper notes that fertility rates could also be reduced by an increase in the age of women at the time of marriage, which could well be linked to the availability of work opportunities for women.

Kerala has made commendable progress in the field of family welfare. According to official figures, the IMR in the state in 1985 was 28 per thousand. Similarly, the maternal mortality rate (1.2) is right now lesser than what is planned for 2000 A.D. and much lesser than the current national figure of 4.5. The life expectancy at birth for a male and female is 64 and 67 years respectively. The corresponding all-India figures are 52 and 51.6 years, while the target for 2000 A.D is 64 years. The birth rate (22.4) is significantly less than the national average of 33.6. The effectiveness of the family welfare programme is the reduction of infant mortality, maternal mortality, increase in life span. All these efforts over the last three decades have resulted in the Couple Protection Rate and this is perhaps the highest in Kerala at 51.42 per cent (*The Times of India* 3-7-1988).

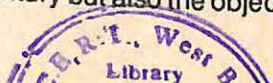
Similarly, Goa's success in reducing the number of births from 31.8 at the time of its liberation in 1961 to 18.2 today is a result of many other factors apart from economic development of the state. One of the reasons for couples settling for small families is the security of their children's lives. Prenatal mortality is negligible and the health care system for both mother and child is of a very high order. A well-developed medical infrastructure, particularly in the rural areas, and a pronounced health consciousness are important contributory factors for the low birth rate in Goa. The doctor-population ratio of 1:932 in Goa is not only way ahead of the national average of 1:6000 but is also rated to be better than that of a developed country like the U.S. Dr. Ananda Helecar, Director of Health Services, points out that there are three hospital beds per 1000 population in Goa as against the national average of just 0.5 beds. There are hardly any cases of mismanage-

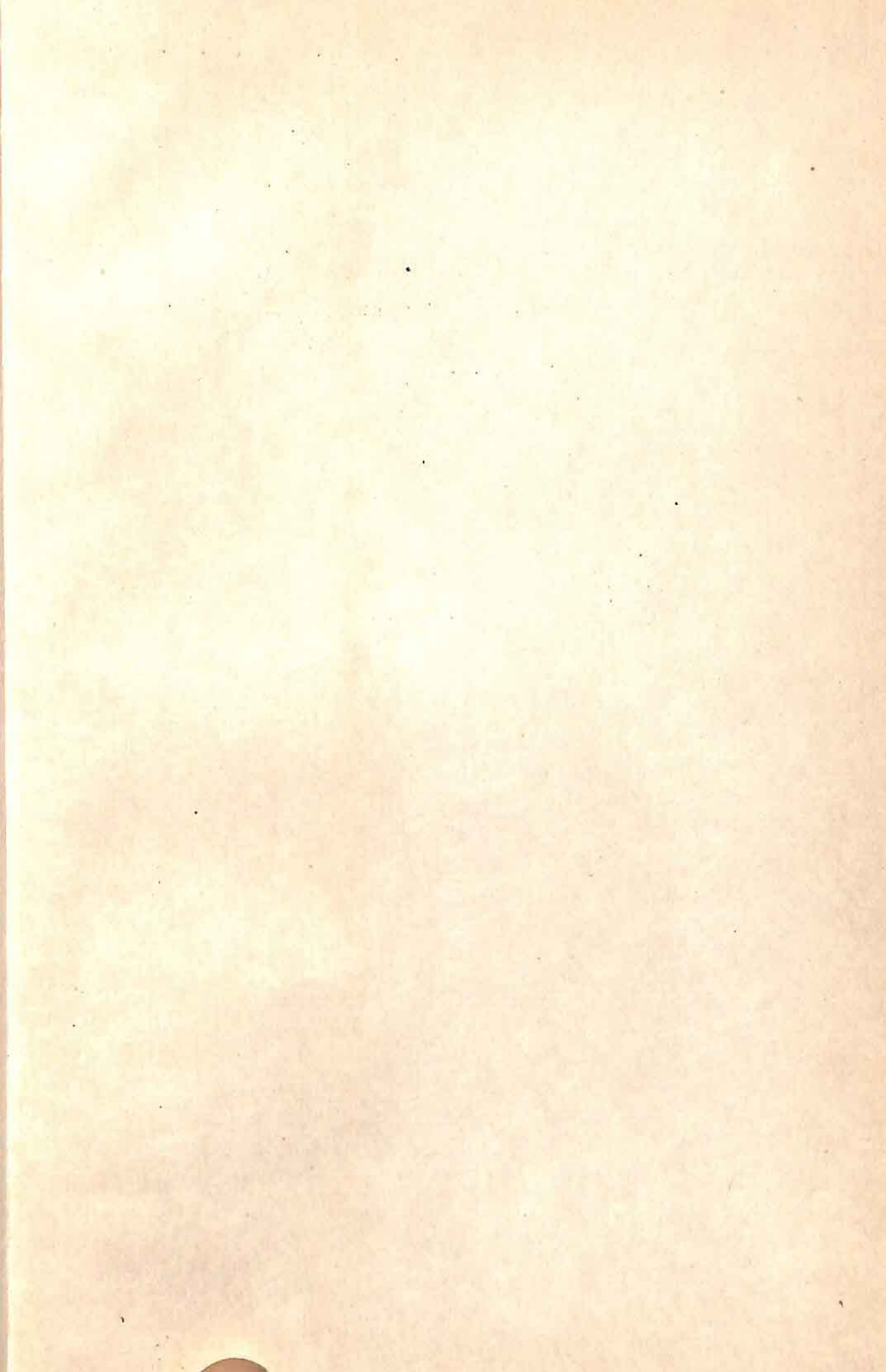
ment of child delivery, for as many as 82 per cent of the deliveries are institutional. Even the remaining 18 per cent done at home are attended to by at least one qualified medical person (*The Times of India* 15-9-1988).

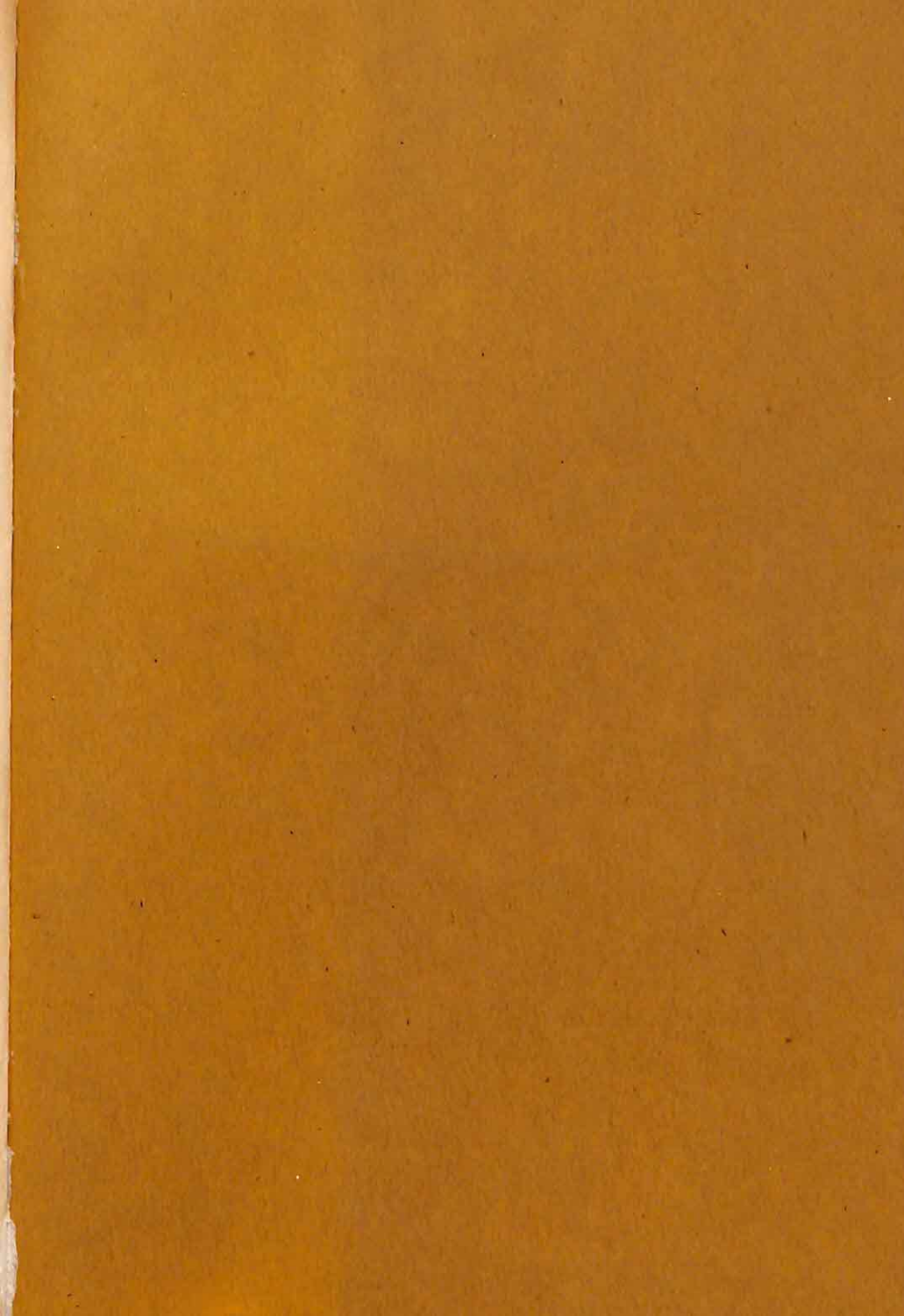
It should be strongly suggested for policy making that the current contraceptively-oriented approach to birth control should give way to an integrated thrust towards providing literacy, better health and more employment opportunities to Indian women. The new strategy should put family planning in the broadest dimension of social change. It should be made a people's movement and a community endeavour. Maharashtra Government has taken the right step in the field of family planning by ceasing to apply pressure on teachers, gram sevaks, talatis and other Government staff to procure couples to meet sterilization targets under the threat of transfer if they fail to meet their targets. This will reduce corruption and manipulation that has come to be associated with the efforts to reach family planning targets. We can hope that now family planning will not be in terms of fulfilling targets but ensuring that these are met within the general health framework.

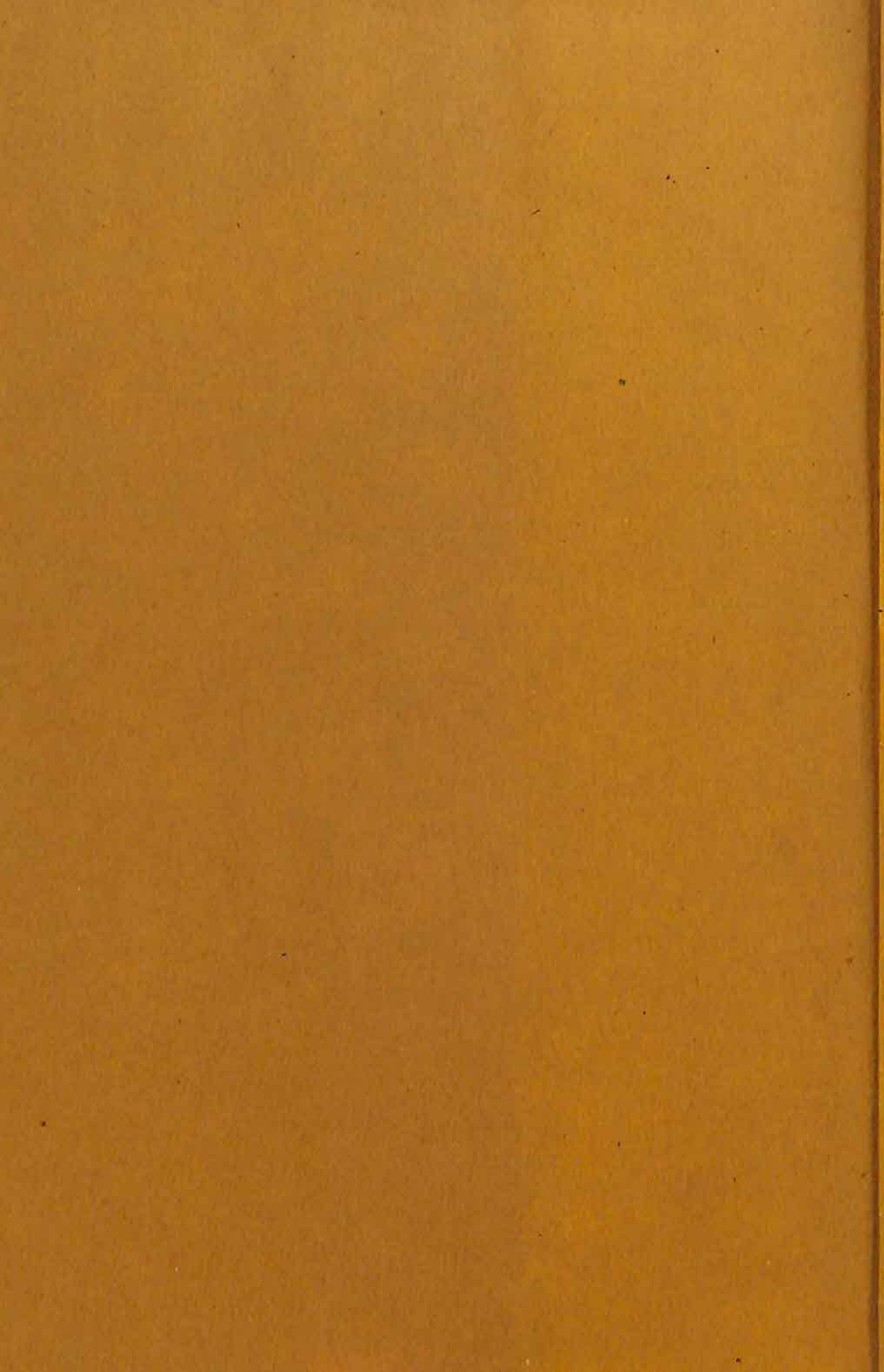
A more effective and comprehensive long-term strategy is required. The general health of the population has become irrelevant to the family planning programme which got shifted from the health spectrum. The most urgent question in the population field today is what are the barriers to change and what can we do about them? It is necessary to have a fresh look at the country's health programme. The question remaining to be answered is whether it is possible to develop an efficient health system for the vast majority of our people within the existing infrastructure and under the existing social and political system? It has been said that the remarkably foresighted report of the Bhore Committee in 1946 has been an outstanding blueprint for the extension of basic health care in India. The historic document had provided an excellent framework for all the objectives of the Alma Ata declaration that came much later. It is regrettable that the recommendations of this report remained unimplemented and were not accorded the highest priority.

What we require is highly trained and committed professionals and a large cadre of paramedicals who can work in their own communities as is done in China. If we can eliminate communicable diseases by educating people in basic health needs and providing sanitary conditions, check diseases of infancy and childbirth, supplement nutrition requirements of infants, pregnant and nursing mothers and distribute other basic amenities of life to them equally, we will not only achieve the objective of health for all by the turn of this century but also the objective of family planning.









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